

HOW CAN TECHNOLOGICAL DEVELOPMENT HELP PAKISTAN IN UPLIFTING ITS FRAGILE ECONOMY?



**ENHANCING LINGUISTIC
TECHNOLOGY: IMPORTANCE
OF URDU LANGUAGE
PROCESSING IN AI**

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Managing Editor

Dear readers,

In this rapidly evolving landscape, Pakistan finds itself at the crossroads of innovation and progress. Our latest issue is a testament to the transformative power of technology in the context of Pakistan's economy, culture, and future.

Technological development is a driving force behind global progress, we explore how it can become a lifeline for Pakistan's fragile economy. Our article, "How Can Technological Development Help Pakistan in Uplifting Its Fragile Economy?" sheds light on the myriad ways in which innovation and digitalization can reshape Pakistan's economic destiny.

The gig economy is reshaping the way people work, and Pakistan is no exception. In "The Gig Economy in Pakistan: Navigating Success and Challenges in Freelancing," we explore the experiences of freelancers in Pakistan, shedding light on their success stories and the obstacles they face. This dynamic shift in work culture not only offers employment opportunities but also has the potential to fortify Pakistan's economic resilience.

Language is the key to communication, and in a digital world, linguistic technology plays a pivotal role. Our article, "Enhancing Linguistic Technology: Importance of Urdu Language Processing in AI," underscores the significance of nurturing the Urdu language in the realm of artificial intelligence. Pakistan is poised to lead the way in this essential field, which promises transformative implications across various sectors.

In a world brimming with digital communication, we delve into the captivating evolution of emojis. These tiny icons have transcended language barriers and cultural boundaries, making them a universal form of expression. Discover the fascinating journey of emojis in our article, offering a glimpse into how technology has transformed even the simplest aspects of our lives.

In addition to these enlightening articles, we invite you to explore our regular sections, including in-depth phone reviews, intriguing "Smart Moves," a curated list of top applications, and a smartphone wishlist. We always try to bring something new and exciting for our readers and hope you guys will appreciate our efforts and give us your feedback so that we can improve further.

Enjoy Reading....!!!

Sincerely,
Adnan Khan.

Feedback

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In a world increasingly driven by technology, emojis have emerged as the colorful, miniature companions of our digital conversations. These tiny symbols hold the power to convey emotions, reactions, and even complex ideas with just a single tap. From the humble beginnings of smileys to the animated expressions that now pepper our chats, emojis have evolved into a universal language of communication that transcends borders and languages.

emojis have evolved into a universal language of communication that transcends borders and languages

The Birth of Emojis: A Short History

The journey of emojis began in the late 20th century, with the advent of text-based communication. Scott Fahlman, a computer scientist, is credited with using the first emoticons – the simple :-) to convey a smile and :- (to express sadness – in an online post in 1982. These rudimentary emoticons laid the foundation for what would eventually become the vast world of emojis.

Fast forward to 1999, and Shigetaka Kurita, a Japanese artist, designed a set of 176 pixelated symbols for a mobile communication platform, which he named “emojis,” a portmanteau of the

Japanese words for picture (e) and character (moji). This marked the birth of the modern emoji as we know it.

and Shigetaka Kurita, a Japanese artist, designed a set of 176 pixelated symbols for a mobile communication platform, which he named “emojis,”

The Rise of Emojis: A Language Beyond Words

Emojis quickly gained traction, finding their way into mobile devices and messaging apps. The ability to express emotions, reactions, and nuances through these tiny images resonated with users globally. What began as a playful addition to texts soon evolved into an integral part of digital communication, with the Oxford English Dictionary even selecting the “Face with Tears of Joy” emoji as the Word of the Year in 2015.

As emojis gained popularity, they also grew in diversity and representation. Unicode Consortium, the organization responsible for standardizing characters across different devices, recognized the importance of inclusivity and began introducing emojis representing various cultures, identities,

and activities. This expansion allowed individuals to find emojis that reflected their own experiences, fostering a sense of belonging in the digital realm.

the Oxford English Dictionary even selecting the “Face with Tears of Joy” emoji as the Word of the Year in 2015

The Most Popular and Quirkiest Emojis

Among the thousands of emojis available today, several have risen to prominence as the favorites of digital conversationalists:

Fire Emoji: This emoji became synonymous with something being incredibly cool or exciting, earning its place as a go-to reaction for expressing admiration.

Face with Tears of Joy Emoji: Widely recognized as the “laughing-crying emoji,” it conveys uncontrollable laughter and humor, often used to lighten the mood.

Heart Emoji: An embodiment of love and affection, the heart emoji comes in various colors and styles, allowing users to convey different shades of emotions.

Raised Hands Emoji: This emoji is often used to celebrate achievements or express enthusiasm, resembling a virtual high-five.

Thinking Face Emoji: When in doubt or pondering something, the thinking face emoji captures that moment of contemplation perfectly.

Pizza Emoji: As a symbol of deliciousness, the pizza emoji is a favorite among foodies, representing comfort and cravings.

Thumbs Up Emoji: Offering approval and agreement, the thumbs up emoji remains a straightforward way to express positivity.

Animated Expressions: Emojis in Motion

Emojis continue to evolve with the introduction of animated versions. These dynamic expressions bring emojis to life, enhancing their ability to capture a wide range of emotions. From the dancing lady to the facepalm, these animated emojis add a playful dimension to digital conversations.

In the ever-evolving landscape of digital communication, where the boundaries of language and geography are effortlessly traversed, emojis have assumed an indispensable role as conduits of emotions. While static emojis have long been the faithful companions of our texts and chats, the emergence

of animated emojis has ushered in a new era of expression. These kinetic symbols infuse vitality into the virtual dialogue, enriching the way we convey feelings and experiences. “Animated Expressions” revolutionizes the way we communicate, bringing about a delightful synergy between technology and emotion.

As the demand for more immersive digital interactions grew, the concept of animated emojis was born. These animated versions infuse movement, transforming these once-static symbols into dynamic conveyors of sentiment. Imagine the heart-eye emoji not just static but animated, with hearts fluttering around the eyes in a rhythmic pattern. The previously fixed expressions are now brought to life, reflecting the nuances of human emotions with the added dimension of motion.

Emojis are more than just a technological advancement – they are a testament to the timeless human need for connection and expression. Through the subtle dance of animated symbols, our digital conversations become richer, more engaging, and ultimately more human. They offer a window into our emotions, a canvas for our creativity, and a bridge that spans the divide between screens and souls

Emojis are more than just a technological advancement – they are a testament to the timeless human need for connection and expression

Emojis have undergone a remarkable evolution, transforming from simple smileys to a diverse collection of symbols that transcend language barriers. Their ability to convey emotions succinctly and universally has made them an essential part of our digital interactions. As emojis continue to adapt and expand, they remain a testament to the ever-evolving nature of communication in the digital age, where even a single symbol can speak volumes. So, the next time you send that heart emoji or use the crying-laughing face, remember that you’re participating in a global conversation uniquely facilitated by these tiny, expressive icons.





National

Enhancing Linguistic Technology: Importance of Urdu Language Processing in AI

Laiba Mohsin

The domain of artificial intelligence (AI) has been rapidly evolving. It is transforming the way we interact with technology and harnesses the power of language to gain remarkable accomplishments. As AI continues to progress, it's critical to emphasize the significance of inclusive linguistic technology. One of the many languages that hold tremendous importance in this context is Urdu. Urdu Language Processing (ULP) in AI not only improves digital interactions for Urdu speakers but also contributes to bridging the linguistic gap in the AI terrain. Let's explore the advancements in AI technology tailored for Urdu, focusing on chatbots, translation services, and voice recognition.

Chatbots are AI-driven virtual assistants. It would not be wrong to say that they have become integral to many industries, from customer services to healthcare. As far as Urdu is concerned, AI developers and linguists have made substantial strides in creating chatbots that can understand and respond to user questions in a natural and contextually appropriate manner.

. Urdu Language Processing (ULP) in AI not only improves digital interactions for Urdu speakers but also contributes to bridging the linguistic gap in the AI terrain

One of the major hurdles in developing Urdu chatbots is the language's complex script and grammar. However, improvements in **Natural Language Processing (NLP)** have led to the creation of Urdu-specific models that can understand the delicacies of the language.

Researchers and developers in **Pakistan** have been working on creating and fine-tuning natural language processing (NLP) models, especially for Urdu. These models have the ability to understand, sentiment analysis, text generation, and machine translation. The AI bots enhance user experiences for Urdu speakers on different digital platforms. For instance, the world's first "AI Urdu voice-recognition bot" dubbed **RUBA** (Real Urdu Bot Automation) was launched by a **Pakistani firm** back in 2019. It was designed as a collaboration between C-Square and Genesys.

During the pandemic, **Pakistan Government** even launched **Urdu Twitter Chatbot** for Coronavirus Updates. Since then, the number of Urdu AI Bots has been increasing in Pakistan. Many Pakistani startups and companies have ventured into chatbots and virtual assistants that talk with users in Urdu for different industries such as e-commerce, customer support, and healthcare.

Many Pakistani startups and companies have ventured into chatbots and virtual assistants that talk with users in Urdu for different industries such as e-commerce, customer support, and healthcare

Language barriers can hamper communication and collaboration in this interconnected world. A good piece of information is that AI-driven translation services have changed the way language interacts. Urdu has not even been left behind. **Advanced machine translation models** including the highly anticipated neural machine translation have been adjusted to cater to Urdu, allowing automatic translation between Urdu and other languages. These **translation services** stretch beyond simple word-to-word mutations. They focus on context, tone, and cultural nuances to deliver accurate and meaningful translations. It allows Urdu speakers to engage with a broader audience and vice versa. The **Nayi Udaan project** was initiated by the Punjab Information Technology Board (PITB) in Pakistan. It aims to provide visually impaired people with access to education and employment opportunities. As part of this project, an Urdu TTS system was developed to transform written content into spoken Urdu. **NGOs in Pakistan** have been supporting the development of such TTS systems to support education and information, especially for the visually impaired community.

Voice recognition technology has also changed the way we interact with devices whether they are smartphones or smart speakers. Voice recognition created unique challenges, especially for Urdu due to its multifarious phonetic characteristics and accents. The good part is that AI researchers have made unprecedented advancements in this domain, developing voice recognition systems that can accurately transcribe spoken Urdu into text. These voice recognition systems have applications in different fields including transcription services and voice-controlled applications. They designate Urdu speakers to interact with technology using their natural voice, making gadgets and apps more accessible and user-friendly. **Telecom companies and customer service centers in Pakistan** use Urdu speech recognition systems for interactive voice response (IVR) services. They allow customers to interact with automated systems using their voice, making inquiries, bill payments, and other transactions. Many **language learning apps in Pakistan** have incorporated Urdu speech recognition to help users improve their spoken Urdu.

For example, **Dekh Tamasha, UrduPod101, Bolo Urdu, BridgingTheGap, Sabaq Foundation, Learn Urdu Quickly, Urdu Language Learning – Qawaid, Mazmoon Urdu**, etc.

Why Urdu is significant for AI in Pakistan?

The advancements in AI technology tailored for Urdu have far-reaching advantages. They allow seamless digital interactions, enable cross-language communication, and strengthen Urdu speakers to access information and services in their mother language. These improvements also contribute to holding linguistic diversity and cultural heritage. **Urdu technology is significant for AI in Pakistan** for several significant reasons. Let's dig into it.

Urdu AI can revolutionize education by providing access to AI-driven learning platforms and resources in the Urdu language. This can bridge gaps in education, improve literacy rates, and empower individuals with knowledge and skills needed for personal and economic growth. As Urdu is the national language of Pakistan and is widely spoken across the country, developing AI systems tailored to Urdu increases accessibility to technology for a larger part of the population. Our country is no doubt a linguistically diverse country with numerous languages and dialects. Prioritizing Urdu in AI technology will make it more inclusive and accessible to a more extensive demographic, overreaching linguistic barriers and guaranteeing that AI advantages reach a wider population. It will also be quite helpful for **Local Content Creation**. Pakistan can facilitate the creation of local content across different sectors by using Urdu in AI applications. Urdu-centric AI technology can be used to improve education in Pakistan. Pakistani government can create more e-learning platforms, educational chatbots, and tools to encourage learning in the mother language. Pakistan can vigorously participate in the advancement of AI technology on an international scale by forming language models, datasets, and applications in Urdu.

Pakistan can facilitate the creation of local content across different sectors by using Urdu in AI applications. Urdu-centric AI technology can be used to improve education in Pakistan

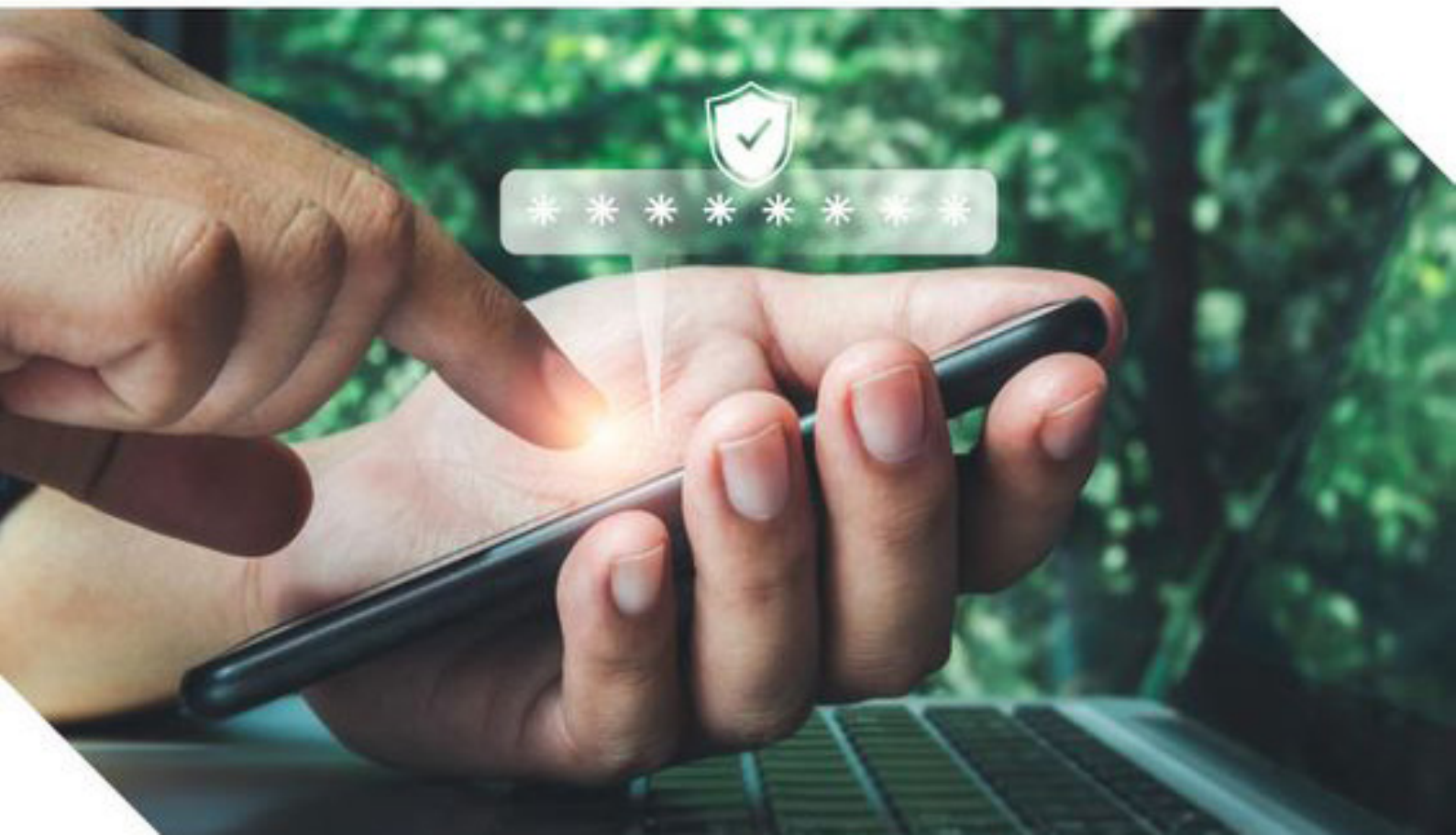
AI chatbots and systems will play a critical role in facilitating citizen-government interactions, making information and services more accessible to the public in Urdu.



A Guide to **AUTHENTICATION FACTORS:**

Knowledge, Possession, and Inherence

Multi-Factor Authentication Explained



Multi-factor authentication (MFA) is a multi-layered protection framework that verifies the identity of a user attempting to log in from a secured network, system, or application. Aside from the traditional password, it requires additional factors to secure information.

Knowledge Factor: *Something You Know*



A knowledge factor is often referred to as “something you know,” as it requires the user to provide knowledge on confidential information before they can access a secured network.

Common examples:



Passwords

A password is a string of characters a user sets to access a protected system. It may vary in length, combination, and case, but ultimately, the more complex one is, the better.



Personal identification numbers (PINs)

Contrary to popular belief, passwords and PINs are not the same. Typically, PINs are significantly shorter at four to six characters and tied to a device.



Security questions

Correct answers to security questions can verify users, even when they've forgotten their credentials or tried to access an account from an unfamiliar device or location.

Possession Factor: Something You Have





The possession factor demands “something you have” before being granted access to the network, requiring the use of a physical object owned by the authorized user like a token or device.

Common examples:



SMS one-time passwords (OTPs)

OTPs are automatically generated unique passwords usually sent via SMS to the number registered by the user and meant to be used once within a given timeframe.



Hardware tokens

A hard token is a compact hardware tool that generates OTPs to authorize the user access to a particular network.



Security keys

Like a hard token, a security key is a portable device that gets plugged into your computer's USB port. Once connected, it will cryptographically sign to let you in the domain you want to access.



Redmi A2 PLUS

A Practical Budget
Smartphone





OVERVIEW

The smartphone has a plastic back with a textured finish that is very grippy. The display measures 6.52-inch IPS LCD display and a resolution of 720 x 1600p and is surrounded by bezels that get thicker around the chin. Redmi A2+ gets some important upgrades under the hood. The smartphone is powered by MediaTek Helio G36 SoC and runs Android 13 Go Edition out of the box. With the MediaTek Helio G36 chip inside, the Redmi A2+ does a good job of handling basic tasks like texting, social media browsing, music playback, and switching between multiple apps. Redmi A2+ is equipped with a 5,000mAh battery that easily lasts an entire day if you are a heavy user. Redmi A2+ offers an 8MP primary shooter and a 0.08MP depth sensor.



Slim and attractive design

Good battery life

Android 13 (Go Edition)



Doesn't have a USB Type-C port

Inconsistent cameras



Final Verdict:

The Redmi A2+ gives up a solid performance for an entry-level phone. It can handle regular everyday tasks very well and the 6.5-inch LCD display is ideal for watching videos and movies. The 8MP camera on this phone gives up a decent performance under good lighting.



In recent years, Pakistan has witnessed a significant rise in the gig economy, a phenomenon driven by technological advancements and the growing trend of remote work. Freelancing, once a niche concept, has transformed into a thriving industry, offering both opportunities and challenges to a diverse pool of skilled individuals in the country.

The Rise of Freelancing: A Digital Revolution

The advent of digital platforms and the internet has reshaped the way work is done globally. Pakistan, with its burgeoning youth population and a pool of talented individuals, has emerged as a hub for freelancers across various sectors. The gig economy in Pakistan encompasses a wide array of services, including content writing, graphic design, software development, digital marketing, and more.

Pakistan is the 4th fastest growing country in the world, with an impressive 78% growth rate annually. Pakistani freelancing market has generated over \$500 million in the last year as shared by the IT ministry. There are currently an estimated 3 million freelancers in Pakistan.

Pakistan's thriving freelance industry now accounts for 9% of the global market. Pakistan ranks among the top 3 countries from which employers hire most freelancers. In 2020 – 2021, Pakistan's IT exports gained huge momentum with a historic high of \$2.12 billion. The average Pakistani freelancer earns an impressive \$34,000 (60 lakhs PKR) annually, with a standard hourly rate of \$20 for working 30 or more hours per week.

Pakistan's thriving freelance industry now accounts for 9% of the global market

According to data published by UpWork and Paycom, 47% of the freelancing market in Pakistan consists of women, higher than the global average, which is only 35%.

Moreover, Pakistan ranks third in the world in terms of the number of freelancers on Freelancer.com. Freelancer.com boasts a user base of 240,000 Pakistani freelancers, with the number of self-employed individuals in Pakistan rising from 33.3% to 39.9%.

These figures not only underscore the remarkable growth of freelancing but also emphasize its increasing importance to the Pakistani economy.

The appeal of freelancing lies in its flexibility. Freelancers can choose their work hours, clients, and projects, providing them with a better work-life balance. Additionally, the ability to tap into the global market enables Pakistani freelancers to work with clients from different countries, offering exposure to diverse industries and perspectives.

According to data published by UpWork and Payoneer, 47% of the freelancing market in Pakistan consists of women, higher than the global average, which is only 35%

The Future of Work in Pakistan: Navigating the Gig Landscape

The gig economy's rapid growth reflects broader shifts in the global workforce. While the traditional 9-to-5 job structure is not likely to vanish entirely, the prevalence of freelancing is expected to continue expanding. As Pakistan strives to position itself as a competitive player in the global gig economy, several key factors come into play.

First, investing in digital infrastructure is paramount. Reliable internet access and improved connectivity are foundational to the success of freelancers. By bridging the digital divide, the country can tap into the immense potential of its skilled workforce and provide opportunities for individuals in remote areas to participate in the gig economy.

Second, fostering a supportive ecosystem is essential. This includes both formalized legal frameworks that safeguard the rights of freelancers and platforms that facilitate seamless interactions between clients and digital nomads. The government, private sector, and educational institutions must collaborate to create an environment where the gig economy can thrive while ensuring that the rights and well-being of workers are protected.

Third, upskilling and reskilling efforts are crucial for sustaining the gig economy's growth. The digital landscape evolves rapidly, and freelancers must stay abreast of the latest trends and technologies to remain competitive. Continuous learning initiatives, mentorship programs, and access to relevant training can contribute to the overall development of Pakistan's freelancing community.

The gig economy's rapid growth reflects broader shifts in the global workforce. While the traditional 9-to-5 job structure is not likely to vanish entirely

Challenges in the Gig Economy

The gig economy is a rapidly growing trend in Pakistan, and it is having a significant impact on the economy and the workforce. Freelancing is one of the most popular forms of gig work in Pakistan, and they offer many benefits to those who choose to pursue them. However, there are also some challenges associated with these types of work, such as the lack of a social safety net and the isolation that can come with working remotely.

One of the primary hurdles is the lack of access to capital, which proves to be a formidable barrier to initiating or expanding their businesses. The absence of adequate financial resources can curtail their ability to invest in necessary tools, technology, and marketing efforts, impeding their potential for growth.

Furthermore, the absence of a comprehensive legal framework dedicated to safeguarding the rights of freelancers adds another layer of complexity. This deficiency can lead to difficulties in resolving disputes and ensuring the protection of their hard-earned income. Without proper legal support, individuals engaging in these fields may find themselves at a disadvantage when trying to address contractual conflicts or intellectual property concerns.

upskilling and reskilling efforts are crucial for sustaining the gig economy's growth

To truly empower Pakistani freelancers, it is crucial to address these multifaceted challenges. This can be achieved through initiatives that provide easier access to capital, the establishment of protective legal frameworks, the simplification of taxation processes, and the promotion of awareness campaigns to break down the unwarranted social stigma. By fostering an environment conducive to these modern work arrangements, Pakistan can unlock the full potential of its freelancers, contributing to both individual success and the overall growth of the economy.

Looking Ahead: The Potential and Promise

The gig economy in Pakistan holds immense potential for economic growth and individual empowerment. As the country continues to invest in technological infrastructure and digital literacy, freelancing could become a cornerstone of the nation's economic landscape. Success stories will inspire a new generation of freelancers to harness their skills and contribute to the global workforce.

National

How Can Technological Development Help Pakistan in Uplifting Its Fragile Economy?

Usama Anjum



Pakistan, a nation with a rich cultural heritage and a burgeoning population, has long grappled with economic fragility. Despite possessing considerable resources and a hardworking populace, Pakistan faces various challenges on its path to economic prosperity. One of the most promising avenues for the country's advancement is technological development. However, despite its potential, technology has not yet taken center stage in Pakistan's economy. This article delves into how technological development can uplift Pakistan's fragile economy and explores the reasons behind its current underutilization.

The Potential of Technological Development

Economic Diversification:

Historically, Pakistan has heavily relied on its agriculture sector, which, while being a significant contributor to the economy, is also susceptible to various challenges. Climate change has resulted in unpredictable weather patterns, leading to reduced crop yields. Additionally, the agricultural sector faces resource constraints, particularly water scarcity, which poses a severe threat to food security.

Technological development can play a pivotal role in diversifying Pakistan's economy. By investing in cutting-edge technologies and innovation, Pakistan can promote industries beyond agriculture. Here are some key areas where diversification is achievable:

Information Technology (IT):

Pakistan has a growing IT industry with the potential to compete globally in software development, data analytics, and IT services. By fostering an environment conducive to tech startups and offering incentives for IT companies, Pakistan can become a regional IT hub.

By fostering an environment conducive to tech startups and offering incentives for IT companies, Pakistan can become a regional IT hub

Biotechnology: Biotechnology has immense potential in agriculture, healthcare, and pharmaceuticals. Pakistan can harness biotechnology for crop improvement, disease control, and the development of bio-based products.

Renewable Energy: With abundant sunshine and wind resources, Pakistan can develop a robust renewable energy sector. Solar and wind technologies can reduce the country's reliance on fossil fuels and mitigate environmental challenges.

Improved Productivity:

Technology's transformative power lies in its ability to enhance productivity across various sectors. The adoption of technology-driven solutions can lead to:

Automation: Manufacturing and industrial processes can benefit from automation, reducing labor costs and increasing efficiency. Automation can also minimize errors, resulting in higher-quality products.

Artificial Intelligence (AI): AI can streamline decision-making processes by analyzing vast amounts of data rapidly. In agriculture, for instance, AI can optimize planting schedules and predict crop diseases, increasing agricultural productivity.

Data Analytics: Data-driven insights enable businesses to make informed decisions. By harnessing big data analytics, sectors like finance, healthcare, and logistics can optimize operations, reduce costs, and enhance customer experiences.

Building a robust technological ecosystem that encourages entrepreneurship and innovation is crucial for economic growth

Entrepreneurship and Innovation:

Building a robust technological ecosystem that encourages entrepreneurship and innovation is crucial for economic growth. Pakistan can foster innovation by:

Startup Incubators: Establishing startup incubators and accelerators can provide aspiring entrepreneurs with mentorship, resources, and funding opportunities.

Research and Development (R&D) Investment: Encouraging both public and private sector investment in R&D can lead to breakthrough innovations. Support for academic research and collaboration between academia and industry can drive innovation.

Intellectual Property Protection: Strengthening intellectual property rights ensures that innovators and entrepreneurs are rewarded for their creations, thus incentivizing further innovation.

Global Competitiveness:

Global competitiveness is a key driver of economic growth. Technological advancements can boost Pakistan's global standing by:

Attracting Foreign Investment: Foreign investors are more likely to invest in countries with a skilled workforce and advanced technology infrastructure. Pakistan's commitment to technological development can attract foreign capital.

Increasing Exports: As industries become more technologically advanced, the quality and competitiveness of Pakistani products and services improve. This can lead to increased exports, ultimately improving the country's balance of trade.

Overcoming Barriers to Technological Development in Pakistan

Digital Divide: Bridging the digital divide is a critical challenge in Pakistan. While urban areas often have access to digital infrastructure such as high-speed internet, rural and remote regions frequently lack these essential services.

Building a robust technological ecosystem that encourages entrepreneurship and innovation is crucial for economic growth

Investment in expanding digital infrastructure, including broadband internet and mobile networks, is essential to ensure that even the most remote areas have connectivity. High costs associated with digital access can deter adoption. Government initiatives and private sector partnerships can make digital services more affordable and accessible.

Education: Pakistan's education system faces several challenges in producing a tech-savvy workforce. Modernizing the education curriculum to include STEM subjects is crucial. This can be achieved through curriculum reforms, teacher training, and the provision of up-to-date learning materials. Establishing vocational training centers focused on technology-related skills can bridge the gap between education and employment, providing students with practical, job-ready skills.

Regulatory Hurdles: Pakistan's regulatory environment hinders technological innovation and business growth. Simplifying and streamlining regulatory processes can reduce the bureaucratic burden on tech businesses, making it easier for startups to establish themselves and thrive.

Offering incentives such as tax breaks or grants for tech startups and investors can stimulate growth and innovation in the technology sector.

Political Stability: Political instability deters foreign investment and disrupt the business environment. Ensuring consistent policies and a stable political environment can build trust among both domestic and foreign investors, encouraging long-term commitments to Pakistan's tech sector.

Implementing robust legal frameworks for investor protection can provide assurances to businesses, making Pakistan a more attractive destination for foreign capital.



CyberSecurity: With increased technology adoption comes an elevated risk of cyber threats. Investing in cybersecurity infrastructure, including secure networks and data protection measures, is vital to safeguard critical information and infrastructure from cyberattacks. Promoting cybersecurity awareness and education can help individuals and organizations better protect themselves against cyber threats.

International Collaboration: Pakistan can also leverage international collaborations to accelerate technological development. Partnerships with countries at the forefront of technology, like China and the United States, can provide access to resources, knowledge, and markets. Furthermore, participating in global tech initiatives and forums can help Pakistan stay updated with the latest advancements.

Offering incentives such as tax breaks or grants for tech startups and investors can stimulate growth and innovation in the technology sector

Case Studies

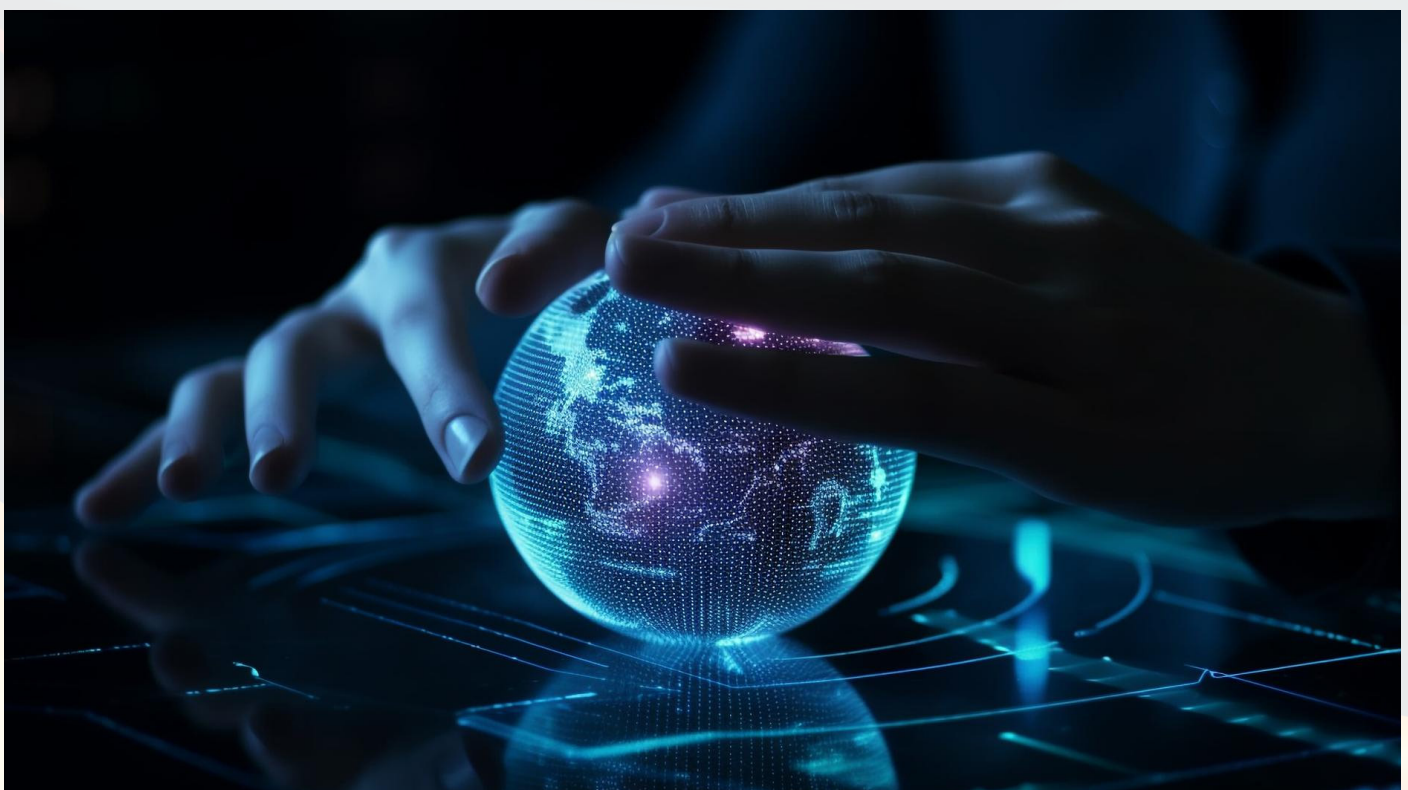
China-Pakistan Economic Corridor (CPEC): An exemplary model of international collaboration, CPEC has brought significant technological advancements to Pakistan. By linking Gwadar Port to China's north-western region, it has not only improved Pakistan's infrastructure but also opened up opportunities for technology transfer.

Silicon Valley Inspiration: Pakistan can draw inspiration from the success of Silicon Valley. Creating similar innovation hubs, offering tax incentives, and fostering an entrepreneurial culture can pave the way for a thriving tech industry.

Technology should not just be a secondary player in Pakistan's economy but rather the driving force that leads the nation to prosperity

Technological development holds immense promise for Pakistan's economy. By diversifying its industries, improving productivity, nurturing entrepreneurship, and enhancing global competitiveness, Pakistan can significantly uplift its fragile economy. However, to harness this potential, the nation must address barriers like the digital divide, education gaps, regulatory hurdles, political instability, and cybersecurity risks. International collaboration and inspiration from successful models like CPEC and Silicon Valley can further expedite Pakistan's journey toward becoming a tech-driven economic powerhouse.

Technology should not just be a secondary player in Pakistan's economy but rather the driving force that leads the nation to prosperity.



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Camera Experience



OVERVIEW

The TECNO Camon 20 is an impressive smartphone that combines a sleek design, powerful performance, and exceptional camera capabilities. It offers a 6.67-inch FHD+ AMOLED display, which provides vibrant and immersive visuals. Equipped with 32MP selfie camera, 64MP RGBW lens and an F1.7 large aperture, this smartphone delivers amazing night photography results. It is equipped with an octa-core CPU consisting of 2x2.0 GHz Cortex-A75 and 6x1.8 GHz Cortex-A55 cores, ensuring smooth multitasking and efficient performance. With a huge 5000mAh battery, 8GB of RAM and 256GB of internal storage (expandable up to 1TB), users can enjoy a seamless experience.

PROS

IP53 rating for water and dust resistance

Huge 5000 mAh battery capacity

Comes with 33W fast charging support

CONS

No 4K video recordings support

Outdated USB Type C 2.0 charging port



Final Verdict:

Overall, the Tecno Camon 20 Pro is a solid flagship-killer smartphone with a price that falls within the mid-range category. Once users get the hang of the device, the Camon 20 transforms into a fully-fledged daily driver that could be one of the top choices in 2023 in this price segment.



GoldFin Limited

Bridging Financial Inclusion through Innovative Gold-Backed Lending

In an era where financial inclusion and innovative lending solutions are gaining momentum, GoldFin Limited, a Lahore-based FinTech startup, has emerged as a significant player in Pakistan's financial landscape. Established in February 2020 and subsequently converted into a Public Limited Company in July 2022, GoldFin has set its sights on revolutionizing the credit industry by providing Investment Finance Services (IFS) through its role as a Non-Banking Finance Company (NBFC).

GoldFin's core mission revolves around leveraging its expertise in gold-backed lending (GBL) to offer a secure and accessible pathway for individuals and businesses to access credit. The company's founder team, composed of experienced bankers, has transformed traditional GBL into an innovative digitized product, combining market research and practical realignment. GoldFin aims to build trust and financial inclusion, particularly emphasizing gender balance and eradicating high-priced informal credit sources.

At the heart of GoldFin's operations is its pioneering approach to gold-backed lending. This method provides a reliable form of collateral for loans, enabling financial institutions to extend credit to a broader customer base while mitigating risk. GoldFin's efforts extend beyond building its own GBL portfolio – the company also acts as a service provider to prominent financial institutions interested in GBL.

A noteworthy partnership has been established between GoldFin and Bank Alfalah, one of Pakistan's leading banks. This collaboration introduces a new financing option for the Small and Medium Enterprise (SME) sector. This partnership underscores GoldFin's extensive expertise in originating loans backed by gold collateral, coupled with Bank Alfalah's commitment to innovative and efficient services.

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hr@goldfin.com.pk



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Joe Gebbia :

Co-founder & Chairman of AirBnB.org

Joe Gebbia is the co-founder of Airbnb and Chairman of Airbnb.org, his brainchild non-profit arm providing housing to those in crisis. An entrepreneur from an early age, he is obsessed with igniting new ideas. He graduated from the Rhode Island School of Design (RISD) where he earned dual degrees in Graphic Design and Industrial Design, and currently serves on the RISD Board of Trustees.

In 2007, Joe Gebbia and Brian Chesky were facing financial challenges in meeting their rent obligations in San Francisco. As luck would have it, a design conference was scheduled to take place in the city. To capitalize on this opportunity, they came up with an innovative idea – renting out air mattresses in their apartment to conference attendees who were unable to secure hotel accommodations.

Gebbia and Chesky quickly saw the potential of their idea and decided to turn it into a business. In 2008, they officially launched Airbnb with the help of Nathan Blecharczyk, allowing individuals to rent out their homes or spare rooms to travelers.

Today, Airbnb is a global powerhouse in the hospitality industry, with listings available in over 220 countries across 100,000 cities. The company has completely transformed the way people travel by offering an alternative option to traditional hotels while providing a more genuine local experience for travelers.

Joe Gebbia is deeply committed to philanthropy and making a social impact, with a strong focus on supporting refugees and helping with housing. In 2016, he launched Airbnb.org, a non-profit organization that enables hosts to offer free housing to those facing crises like natural disasters or resettlement as refugees.

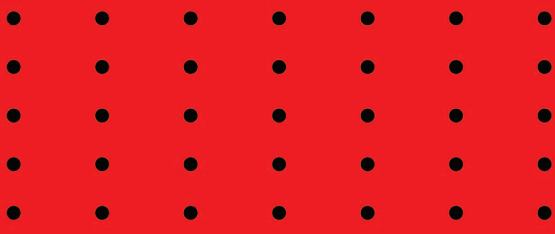
In 2010, he was named in Inc. Magazine's Thirty under Thirty, and in 2013, he was named in Fortune Magazine's Forty-under-Forty. He was also included in The Chronicle of Philanthropy's 2021 list of America's 50 Biggest Charity Donors, alongside Jeff Bezos, MacKenzie Scott, and Michael Bloomberg.



Itel S23

The Undisputed “Budget Phone” King?





OVERVIEW

Itel S23 comes with a 90 Hz refresh rate 6.60-inch touchscreen display offering a resolution of 720x1612 pixels (HD+). Itel S23 is powered by an octa-core Unisoc T606 processor. It comes with 4GB of RAM. As far as the cameras are concerned, the Itel S23 on the rear packs a 50-megapixel camera. It has a single front camera setup for selfies, featuring an 8-megapixel sensor.

Itel S23 is based on Android 12 and packs 128GB of inbuilt storage that can be expanded via microSD card (up to 1000GB). It was launched in Mystery White and Starry Black c colours.



Modern color-Changing Design

50 MP Camera Packed with features

720p display better than most offerings under this class

Minimal bloatwares



Mediocre camera performance

10W charging brick is so slow

No Netflix HD support



Final Verdict:

Itel S23 4G delivers a solid entry-level device with competitive specs and value for money, if not for its mediocre camera quality and slow charging speed. Still, this solid offering will guarantee a head turn from consumers and enthusiasts alike.

PHANTOM



Beyond the Extraordinary

PHANTOM V Fold 5G

Phantom V Fold by TECNO is reshaping trends in the Foldable Phone Market

TECNO, Pakistan's premium mobile phone brand, has officially joined the foldable phone club, offering an enticing price point alongside a cutting-edge processor. The prestigious brand has just launched its first foldable phone, the Phantom V Fold with an avant-garde design, a premium tactile experience, and an excellent user interface, all encapsulated within the dimensions of a compact book.

Empowering users to achieve a higher level of smartphone proficiency, whether for gaming, watching movies, or work, the PHANTOM V Fold offers dual LTPO screens with an adaptive 10-120Hz high refresh rate, ensuring a smooth experience whether the phone is folded or unfolded. The 6.42-inch sub-screen features a unique micro-curved design and a 21:9 aspect ratio, providing a classic single-screen smartphone experience. When unfolded, the PHANTOM V Fold unveils an impressive 7.85-inch display with an optimal 8:7 aspect ratio, all on an ultra-flat screen with an almost imperceptible crease.

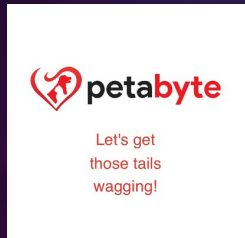
Phantom V Fold is equipped with a versatile camera setup that includes a triple-lens rear system. This system features a high-resolution 50MP main sensor, a 13MP ultra-wide sensor for capturing broader perspectives, and a 2MP macro sensor for close-up shots. On the front, the Phantom V Fold features a dual-lens camera system—one on the sub-screen

and one on the main inner screen—adding an extra layer of enjoyment to photography and offering a wide range of exciting image-making possibilities.

Under the hood, this impressive device is powered by the MediaTek Dimensity 9000+ chipset, delivering exceptional performance that enables efficient multitasking and seamless screen switching. It's complemented by a generous 12GB of RAM and ample 256GB of storage. To keep you powered throughout the day, there's a robust 5000mAh battery, and when it's time to recharge, you can rely on the speedy 45W fast charging support. While the concept of large-screen foldable smartphones holds great promise, it has often been hampered by operating systems that are not well-suited for such devices. To tackle this challenge, TECNO has introduced HiOS13 Fold, an exceptionally refined and customized operating system based on Google's Android 13 platform. This specialized OS is designed to seamlessly address the unique demands of foldable devices.

TECNO
mobile

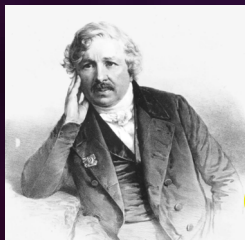
TECH TWIST



01

A Petabyte is a lot of data

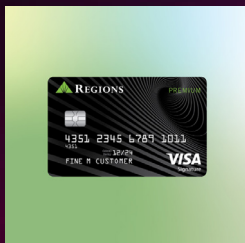
We all know 1 GB is the same as 1024 MB, but did you know that 1 petabyte (PB) is equivalent to 1024 terabytes (TB)? To give an example of how big this is, a 1 PB hard drive could hold 13.3 years of HD-TV video.



02

The first camera needed an incredibly long exposure

The first photograph ever taken in 1826 took 8 hours to expose! The creator of that camera, Louis Daguerre, was able to lower that time drastically to just 15 minutes in 1839.



03

Credit card chips have been around for a LONG time

To many, credit card chips are a relatively new fad. However, chip technology has been around since 1986! It was first used in France, followed shortly after by Germany.



04

Most people plug in their USB wrong

86% of people try to plug in their USB devices upside down. That makes me feel a lot better about getting it wrong every time!



05

Steve Jobs used sleight of hand at the first iPhone presentation

The first iPhone presentation happened six months before the iPhone was set to hit the market. At that time, the phone was too buggy to use, so Steve Jobs often had to switch phones behind his desk. Otherwise, it would run out of RAM and crash.

Infinix Note 30

An Affordable Choice with
Some Amazing Specs



OVERVIEW

The Note 30 doesn't go overboard in the looks department, instead opting for a more traditional and classier look. It brings a large 6.78-inch, 120Hz display to the table, a decent MediaTek Helio G99 chipset, alongside a large 5,000 mAh battery with 45W fast charging. The camera is based on the 64MP OmniVision OV64B40 sensor. A 1/2" sensor with 0.7µm individual pixels. It has PDAF and is paired with an f/1.69 6P lens. The other two rear cameras have f/2.4 and f/2.0 apertures. The phone also has a stereo speaker setup tuned by JBL. The side-mounted fingerprint sensor also doubles as an unlock button.

PROS

**Solid and strong body. IP53 rating. Glass back and front.
Stylish design with faux leather back option.**

**Great battery life and very fast 45W charging, plus lots
of battery features like bypass charging
and reverse charging.**

Good all-around camera quality.

CONS

**The display has disappointing
max brightness.**

**XOS 13 still has a lot of
pre-installed bloat.**



Final Verdict:

The Infinix Note 30 is a solid budget smartphone that offers great value for its price. The most impressive improvement lies in its display, being possibly the only smartphone at this price point to offer a 120Hz refresh rate. Combined with other features such as stereo speakers, fast charging, and a 64MP camera, it's a no-brainer that the Note 30 should be at the top of users' lists in this price range.



How to Improve the Sound on a TV

While technological advancements in your TV's picture receive all the air-time, your TV's audio has also progressed considerably. Don't just concentrate on your home theater system's picture and leave the audio alone. With a few upgrades, you can significantly improve the sound of your TV and provide your home theater with cinematic quality audio.

STEPS TO BE TAKEN

SPEAKER PLACEMENT

Just by making a few adjustments to the speakers that you already have; you can considerably improve the sound quality coming from your audio system. Don't fear the cables running to the back of your living room, they can be easily hidden. Use the rear speakers on your sound system as they were intended. Place them in the back of the room. You'll be amazed at the difference in sound.

SOUND BAR

Many flat panel TV consumers have noticed that the audio output of their new TV is not comparable to the picture on the screen. Sound bars are the ideal complement to a sleek new TV screen. One thing, horizontal speaker can now do the work of a surround-sound audio system. With just one cable connection, you can have supreme sound for a competitive price.

COMPONENT SURROUND SOUND SYSTEM

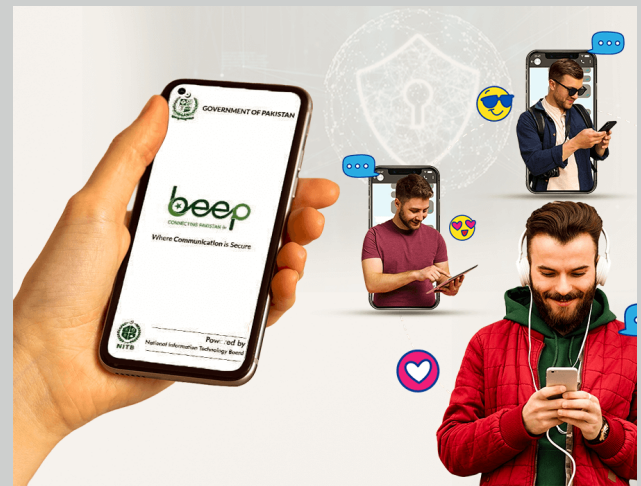
For the serious audiophiles who want superior quality sound, component surround sound systems are the way to go. You can customize your own system to fit your room and viewing needs with speakers, a subwoofer, and an amplifier. If you have a large room and you want big sound, build your own home theater system to match your top-quality TV.



BEEP: A WhatsApp Alternative for Enhanced Security

An alternative to WhatsApp has emerged with the launch of Pakistan's first messaging app. Beep Pakistan is a local chat application equipped with audio and video capabilities like WhatsApp. Furthermore, users will be able to set up conference calls on the app. Initially, the app will be exclusive to specific government officials. Following one month of trial use, all government officers and employees will be able to use the app.

The primary purpose of the app is to ensure the protection of important official conversations among government personnel. The data accessed on the app will be stored in Pakistan so that there is no danger of data breach from external powers. Thus, it will prove to be beneficial, especially for state officials.



'Constitution Mobile App'

This app has been designed with the primary objective of promoting awareness among citizens of Pakistan about their constitutional rights as outlined in the Constitution of Pakistan 1973, as well as the constitutional hierarchy of the country. It aims to provide information on the functioning of key institutions, and the powers and limitations of each government entity.

The app offers a comprehensive list of all Chapters, Articles, and Amendments, options to view Chapters separately, convenient search functionality and a user-friendly interface for seamless navigation.



Teleschool app launched in Pakistan

eLearn is an educational app for an official repository of digitized textbooks developed under the national curriculum. Each book has been augmented with Video Lectures, Illustrations, Animations, Simulations, and Interactive Assessments. Through this App, you can access Science and Maths textbooks for K12, which have been augmented with 13,047 Video Lectures, 592 Simulations, 2100 Audio minutes and 1,830 Animations. The eLearn app is developed by Punjab Information Technology Board (PITB) in collaboration with Punjab Curriculum & Textbook Board and the School Education Department (SED).



G For Gadget

PETOI BITTLE A PALM-SIZED STEM ROBOT DOG

The Petoï Bittle robot is a palm-sized robot dog developed for fun but also serves as a STEM gadget. It is manufactured by Petoï, a startup company whose main goal is to produce simple, innovative pets.

The Bittle robot dog walks, plays tricks, and rolls around just like a real dog. It has been designed to maneuver on all kinds of terrains. You can teach it new skills and make it memorize various patterns.

Additionally, Bittle can be used for STEM education. It is an ideal gadget for teaching and researching STEM projects. It also makes a good present to surprise a family member or a dear friend. However, the robot dog is not a toy for small children. Parental guidance is recommended when kids are playing with it to avoid injury or damage.

Developed on an open-source platform, the Petoï Bittle dog is fused with several appliances to make one organic structure. It is customized with an Arduino board, which synchronizes all intuitive and complicated movements.

You can attach multiple sensors on it to add perception. You can also input some artificial intelligence abilities into the robot dog by clipping artificial intelligence chips or Raspberry Pi through wired or wireless connections.

Once you've ordered the Petoï Bittle Robot, it will arrive as a kit, which you will assemble for the robot dog to come alive.

Features You May Like

- Smartphone Controlled
- Programmable
- Do It Yourself
- Open Source
- Can Carry Up To 450g Cargo



Myth Buster

MORE MEGAPIXELS EQUAL BETTER CAMERA QUALITY

The myth that “more megapixels equal better camera quality” is a common misconception that has persisted in the world of photography for years. It’s essential to debunk this myth to help consumers make informed decisions when choosing a camera or evaluating their smartphone’s camera capabilities.

Megapixels, or “MP,” represent the number of pixels a camera sensor can capture in a single image. In simple terms, a higher megapixel count means more individual dots (pixels) that make up an image. It’s easy to assume that more pixels translate to better image quality, but this oversimplification can lead to misguided choices. While megapixels play a role in image resolution and the ability to print larger photos, they are just one factor among many that determine overall camera quality. Here’s why the megapixel myth needs debunking:

Sensor Size Matters:

A camera’s sensor size is critical for capturing light and details. Larger sensors can gather more light and perform better in low-light conditions. A camera with a smaller sensor but more megapixels may produce noisy or grainy images.

Pixel Size and Quality:

Smaller pixels in a high-megapixel camera can lead to reduced light sensitivity and more noise. In contrast, larger pixels on a lower-megapixel camera can result in better low-light performance and cleaner images.

Lens Quality:

The quality of the camera lens, its aperture, and the lens elements play a significant role in image sharpness, clarity, and color accuracy.

A high-megapixel camera with a subpar lens may not deliver the desired image quality..

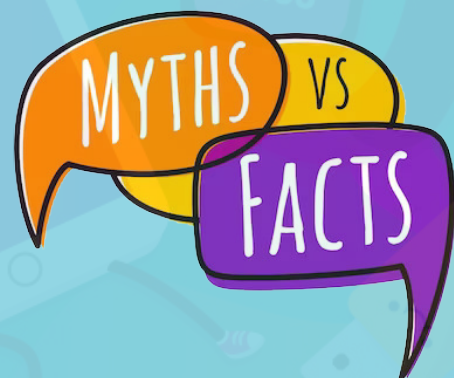
Image Processing:

Image processing algorithms and software are essential in enhancing photo quality. Some cameras, even with lower megapixels, can produce stunning images due to sophisticated processing techniques.

File Size and Storage:

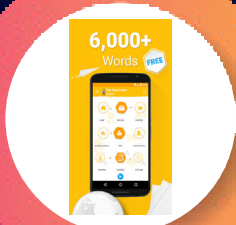
Higher-megapixel images produce larger files, which can quickly fill up your storage space. This can be a disadvantage for those who don’t need ultra-high-resolution images for their intended use.

In many real-world scenarios, a lower-megapixel camera with a larger sensor, quality lens, and advanced image processing can outperform a high-megapixel camera in terms of overall image quality. Consumers should consider a camera’s sensor size, pixel quality, lens quality, and image processing capabilities alongside megapixels when assessing camera quality. Understanding these factors will lead to more informed decisions and better photography experiences.





GAMES & APPLICATIONS

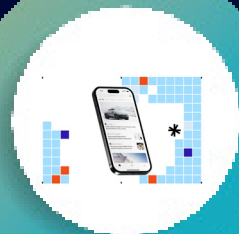


6000 Thoughts

6000 Thoughts is a life coach app. It helps you organize your various thoughts into coherent data that you then use to decide. You start by putting the thought into the app. It then asks you questions, lets you identify your feelings about the thoughts, and other such things until you work it out.

Artifact

Artifact is a news aggregator. It works like most others. You pick the topics that you're passionate about, and the app brings you news about those topics from sources that the developers consider trustworthy.

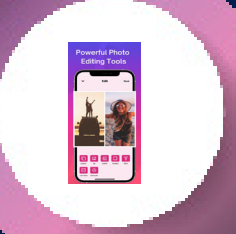


HandyAI

HandyAI is an AI-powered app that offers quite a bit. It does the usual ChatGPT stuff like image generation from text, chatting with an AI bot, and stuff like that. There are some templates and some other models you can experiment with if you want to.

Mia and the Dragon Princess

A live-action, interactive buddy-action movie following Mia, a plucky barmaid whose life is thrown into chaos when a mysterious woman turns up at her workplace, on the run from a group of violent thugs and unable to speak English.



PicMerger Edit Pics & Collages

Everything you need for photo editing all in one app. Stitch photos together, add watermarks, choose from hundreds of templates and collages, add fonts, stickers, & more.

PicMerger has everything you need to edit and create beautiful photo collages all in one place.



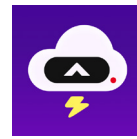


Things 3

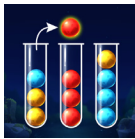
Things 3 is an elegant task manager app for iOS. It features a minimalist design, allowing for intuitive navigation and simple task tracking. The app also integrates with Siri and allows for natural language input to create new tasks.

Carrot Weather

Carrot Weather is a personal weather app that uses a playful personality to deliver accurate weather reports. The app features detailed reports with hourly, daily, and monthly forecasts, as well as updates on severe weather conditions.



Egg Sort



Ball Sort Puzzle – Egg Sort, a color sorting game, is a fun and relaxing game that entertains and stimulates your brain! Quickly sort the colored balls in the tubes until all the same colors are together in the same tube. A challenging yet relaxing game to exercise your brain!

Hotspot Shield

Hotspot Shield VPN, one of the best free VPNs for Android with over 100 million downloads on Google Play, allows you to securely access blocked sites by connecting from 5 different devices.



Stardew Valley

Move to the countryside, and cultivate a new life in this award-winning open-ended farming RPG! With over 50+ hours of gameplay content and new Mobile-specific features, such as auto-save and multiple controls options.

SMARTWATCHES

UNDER

PKR 5000



i9 PRO MAX

PKR/-4,399



HW7 MAX

PKR/-4,999



HAYLOU LS05

PKR/-4,999



STAY TUNED



R
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vivo



V25 5G | V25e

Gorgeous Portrait



*Color Changing Glass is only available on the Sunrise Gold edition and Aquamarine Blue edition.