



**VASIREDDY VENKATADRI INSTITUTE OF TECHNOLOGY**  
Autonomous

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NAAC Accredited with 'A' Grade, ISO 9001:2015 Certified,  
NBA Accredited: B. Tech Programs– CE | CSE | ECE | EEE | ME | IT  
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

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## VVIT - BBC- Department Magazine

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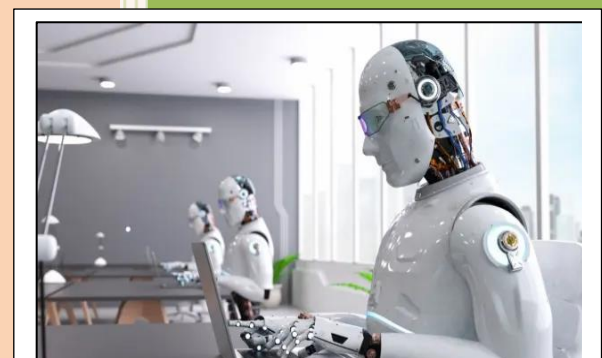
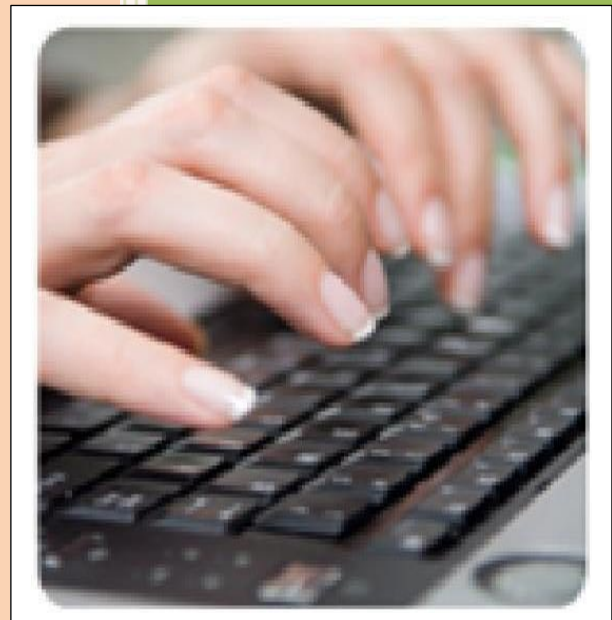
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### High Secure Authentication for Next Generation

## HOW WILL IT TRANSFORM OUR WORLD?

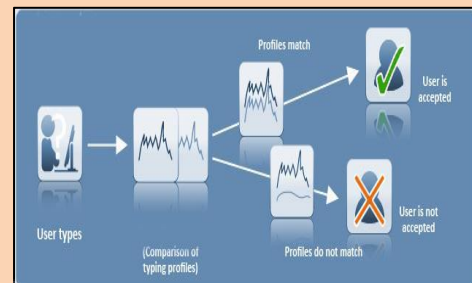
Keystroke analysis is used to identify the identity of the user through their way of typing on a computer keyboard. Typed key measurements available in every keyboard can be recorded to determine 'Dwell time' (The time a key pressed) and 'Flight time' (The time between "key up" and the next key down"). The data of recorded keystroke timing is processed through a unique neural algorithm, which determines a primary pattern for the future comparisons. The neural algorithm is provided with Digraph latencies (The elapsed time between the release of the first key and the depression of the second key). The extractions of such features are accepted from the free text provided for the user to create his own profile. Keystroke is a pure software solution and the required hardware is only a standard keyboard that comes with every computer system. The system does not require sensors or any other additional hardware. Password procedure can be completely replaced by the Keystroke analysis on the Internet. Users need not remember a password. It is highly secure because the behavior of keystroke cannot be imitated, stolen, forgotten or misplaced. The assertion is that a person's keystroke behavior is exactly as unique as their fingerprint was borne out by scientific research at the University of Regensburg. It is possible to identify a user through the way he types on a keyboard even when the user is entering free text in a language



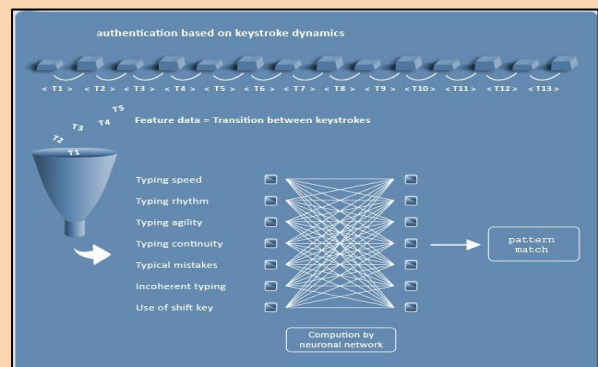
### PREVIOUS MODES OF AUTHENTICATION

1. Password
2. Fingerprint recognition
3. Facial recognition
4. Iris recognition

### Verification for authorized person



### Transition between keystrokes based on pattern match



### USER IDENTIFICATION AND AUTHENTICATION

suppose we have three users A, B and C, with, say, 3 typing samples each one in their profiles (so that, for example, A's profile contains typing samples A1, A2 and A3). A new typing sample X has been provided by one of the users, and we have to decide who entered the sample. We may compute the mean distance (md for short) of X from each user's profile as the mean of the distances of X from each sample in the profile:

$$md(A, X) = (d(A1, X) + d(A2, X) + d(A3, X))/3;$$

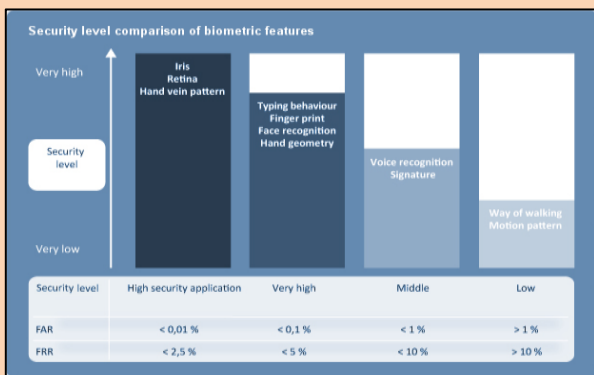
$$md(B, X) = (d(B1, X) + d(B2, X) + d(B3, X))/3;$$

$$md(C, X) = (d(C1, X) + d(C2, X) + d(C3, X))/3.$$

Then, we decide that X belongs to the user with the smallest mean distance among the three.

**BENEFITS OVER OTHER BIOMETRIC DEVICES**

- Pure software solution and accessible without the help of additional hardware.
- Can be set to different security levels, thereby fulfilling a variety of security requirements.
- Do not have to remember a password
- Highly secure because keystroke behavior cannot be imitated, stolen, forgotten or misplaced.
- A short sentence is enough for daily logins.
- The Most important thing is how you type and not what you type. You don't even need to keep the sentence assigned to you as a secret.
- Typos are also allowed as they are part of typing style.
- Training session only takes a few minutes.
- Behavior is inseparable from the person doing the typing. It is available everywhere and at all times and cannot be lost or forgotten.
- High recognition quality.
- Intrusion detection: The generation of false alarms is an endemic problem within intrusion detection in principle keystroke analysis can be used to notice possible anomalies in the typing dynamics of individuals connected to the system, they may be intruders.



**APPLICATIONS**

**Computer/Network security:**

Many stand-alone and network computer systems sustain valuable and sensitive information. Controlling access to these systems is another major use of biometric authentication systems.

**Internet transactions:**

Due to growing security requirements that, many think of on-line transactions as being an conspicuous area for biometrics. The biometric authentication generates a greater degree of vendor confidence because he knows that the person that the person at the terminal is he who he claims to be.

**Physical area security:**

Military, Government, and Commercial installations have sufficiently strong confidentiality concerns. The biometric identifiers plays a major role in controlling physical access to these installations.

**Banking:**

Many leading banks have been experimenting with biometrics for ATM use as a means of combating card fraud. Beginning 2002, some companies will being issuing smart credits cards, with customer's fingerprint information embedded.

**Small scale Voting:**

A logical use of biometrics is in voting process where eligible politicians are required to verify their identity. This is intended to stop "proxy" voting.

**Prisons:**

An interesting use of biometrics is in prisons where the visitors to a prisoner are subjected to verification procedures in order that identities may not be swapped during the visit.



**Article By  
Dr. T. Kameswara  
Rao  
Professor**

**A myth: Increase in the usage of AI Technologies would decrease the Manpower Requirement**



The notion that the increased usage of AI technologies would decrease the manpower requirement is a common myth. While it's true that AI can automate certain tasks and processes, leading to changes in the nature of work, the impact on overall employment levels is more nuanced. In general, the improvements in AI will inevitably decrease the requirement for human labor is a common misconception, but it is not necessarily accurate. While advancements in artificial intelligence and automation can certainly lead to changes in the job market and the nature of work, the impact on employment levels is multifaceted and depends on various factors. Here are several reasons why the myth is flawed:

**1. Job Displacement:**

It's true that certain tasks and roles may become automated as AI technologies improve. This can lead to job displacement for individuals whose roles can be easily automated, particularly those involving repetitive tasks or routine decision-making processes. However, automation can also create new job opportunities in fields related to AI development, data analysis, and technology management.

**2. Job Transformation:**

Instead of outright replacing human workers, AI often augments and complements human capabilities. Many tasks that can be automated are also complex and require human oversight, creativity, and critical thinking. As a result, AI may lead to the transformation of job roles, where humans focus on higher-level tasks that require empathy, intuition, problem-solving, and strategic decision-making, while AI handles repetitive and mundane tasks.

**3. New Opportunities:**

AI advancements have the potential to create entirely new industries and job roles that were previously unimaginable.

For example, the rise of AI has led to increased demand for data scientists, machine learning engineers, AI ethicists, and other specialized roles. Additionally, AI-driven technologies have the potential to spur economic growth, leading to the creation of new businesses and job opportunities across various sectors.

**4. Skill Requirements:**

As AI technologies become more prevalent, there will be an increasing demand for individuals with skills in AI development, data science, programming, and technology management. While some traditional jobs may decline, new opportunities will arise for individuals who possess the necessary skills to work alongside AI systems or develop and deploy AI solutions.

**5. Societal Implications:**

The impact of AI on employment goes beyond just the labor market and extends to broader societal and economic considerations. Policies and regulations may need to be implemented to address issues such as job displacement, income inequality, retraining and upskilling programs, and the ethical use of AI technologies. Additionally, the adoption of AI may vary across industries and regions, leading to disparities in job opportunities and economic outcomes.

**6. Creation of New Jobs:**

While AI may automate certain tasks, it also creates new job opportunities in AI development, data science, machine learning engineering, and AI ethics. These roles require specialized skills and expertise, leading to the creation of employment opportunities in emerging fields. allows the automation platform to behave similarly to a human worker, performing routine tasks, such as logging in and copying and pasting from one system to another. While back-end connections to databases and enterprise web services also assist in automation, RPA's real value is in its quick and simple front-end integrations.

### **7. Augmentation of Human Abilities:**

AI is often used to augment human capabilities rather than replace them entirely. By automating repetitive and mundane tasks, AI frees up human workers to focus on higher-level tasks that require creativity, critical thinking, problem-solving, and emotional intelligence.

### **8. Increased Productivity and Economic Growth:**

AI technologies have the potential to increase productivity and efficiency across various industries, leading to economic growth and expansion. As businesses become more productive, they may need to hire additional workers to meet growing demand and explore new opportunities.

### **9. AI as a Complement, not a Substitute:**

AI is often used as a complement to human workers rather than a substitute. For example, AI-powered chatbots can assist customer service representatives by handling routine inquiries, allowing humans to focus on complex customer issues that require empathy and understanding.

### **10. Ethical and Regulatory Considerations:**

There are ethical and regulatory considerations associated with the widespread adoption of AI technologies. Concerns about bias, fairness, privacy, and accountability require human oversight and intervention, leading to the need for skilled professionals to ensure responsible AI deployment.

### **11. Reskilling and Upskilling:**

As AI technologies continue to evolve, there will be a growing demand for workers with skills in AI development, data analysis, and technology management. This creates opportunities for reskilling and upskilling existing workers to adapt to the changing job market and take on new roles in AI-related fields.

### **12. Variability Across Industries and Regions:**

The impact of AI on employment levels varies across industries and regions. While certain sectors may experience job displacement due to automation, others may see job growth as AI creates new opportunities for innovation and expansion.

### **Conclusion**

the notion that the increased usage of AI technologies would decrease the manpower requirement oversimplifies the complex relationship between AI and employment. While AI can automate certain tasks and processes, it also creates new job opportunities, augments human abilities, and contributes to economic growth and innovation. As AI technologies continue to evolve, it's essential to consider the broader societal, economic, and ethical implications and ensure that AI deployment is conducted responsibly and inclusively. Therefore, while improvements in AI have the potential to reshape the labor market and the nature of work, the relationship between AI and employment is complex and multifaceted. While certain jobs may become obsolete or automated, new opportunities will emerge, and the overall impact on employment levels will depend on various factors, including technological advancements, economic conditions, societal attitudes, and policy responses. Therefore, it is a misconception to assume that improvements in AI will universally decrease the requirement for human labor without considering these broader factors.



**Article By**  
**18BQ1A05F5**  
**PONDURI PRAVALLIKA**



## Faculty Achievements

Dr. P. Sudhakar, a faculty member of the Department of Computer Science and Engineering, has been awarded the Wipro Certified Faculty certificate by Talent Next and Wipro's Digital Skills Readiness Program. This certificate recognizes his expertise and mentorship in Project Based Learning (PBL) in Java J2EE, a popular programming language and platform for web development. Dr P Sudhakar has successfully passed the Talent Next certification assessment, which tests the knowledge and skills of the faculty members in the latest digital technologies. He is one of the few faculty members in the country who have achieved this prestigious certification. We congratulate Dr P Sudhakar for his remarkable achievement and wish him all the best for his future endeavors.



## Global Teachers Award 2020 Winner

Dr. P. Sudhakar attainment of the Global Teachers Award 2020 stands as a testament to his extraordinary dedication and exceptional teaching prowess. Through his unwavering commitment to education, Dr. Putheti has not only imparted knowledge but has also ignited a passion for learning within his students. His innovative teaching methodologies and boundless enthusiasm have created an environment where academic excellence flourishes, leaving an indelible mark on the educational landscape.

Beyond the accolades, Dr. Sudhakar Putheti's recognition serves as a beacon of inspiration for educators worldwide. His tireless efforts and unstoppable spirit epitomize the transformative power of teaching. Dr. Putheti's contributions extend far beyond the confines of the classroom, shaping the future of education and leaving an enduring legacy that will continue to inspire generations of learners.





**20BQ1A05L9  
SHAIK SAJID AMEER**



**19BQ1A05B3  
KOYA MADHAVA NAGA SAI**



**20BQ1A05J6  
P. Y RAJKAMAL TUTU**



**20BQ1A05L8  
SHAIK NUSRAT**



**19BQ1A05M7  
TATA ANIRUDH**



**20BQ1A05I9  
PHINEHAS PRAKASH. J**



**20BQ1A05L9  
SHAIK SAJID AMEER**



**19BQ1A0582  
K. MANI SAI LAKSHMI**



I feel very lucky to have been a part of VVIT, in which I spent crucial 4 years of my life under the guidance of teachers who helped me shape up my future.

VVIT actually helped in my character development. The centers that VVIT provided are honestly appreciable. Library right here offers not just books, but also magazines and technology. I spent most of my leisure time in the library. VVIT also presents labs in which my problem-solving abilities have been developed. During the academic's classes, I was challenged to discover competencies that I in no way knew I had.

VVIT conducts clubs every Friday where I explored my capabilities consisting of animation, dancing, etc. There are numerous events that VVIT organizes which include film promotions, Fest and plenty extra.

The faculty here are distinctly qualified and precisely know a way to teach college students. Their coaching method is so excellent which made me to observe extra and examine extra. Aside from studies VVIT additionally has NCC and NSS.

I used to be a NSS volunteer. On every occasion in college, students used to manage the occasion and make certain to be disciplined. I used to go out for camps from which I learnt most of my training on the way to face the world.



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I thank the institute and the college for all the efforts put in by way of them, alongside the perseverance and proper moves have paid off finally. All my batch pals are doing nicely in their respective jobs which reflect the great of the students the institute has produced.

VVIT was more than college to me. A place where I gained knowledge, best needed for the survival in the outer world and confidence. Right from day 1 I joined in the college energy and enthusiasm is what I experienced, be it Faculty or Students. An amazing institution which teaches you the self-discipline, confidence. The college has good atmosphere to study and play. The best part of the VVIT is SAC. This SAC taught me many more things. Throughout the Academics sessions, I was challenged to discover capabilities that I never knew I had. Along with the Academics, I also participated in many cultural events. I will continue to build upon what I have learned here, which includes continuing to conduct research projects on my own... The opportunities, connections, friendships, and knowledge I acquired from VVIT are invaluable."

To achieve my goals and dreams VVIT has helped me a lot in my career. I got a lot of love and support from my teachers & friends and it made my 4 years, memorable for me.



15BQ1A05F1



### **Department Vision:**

Providing quality education to enable the generation of socially conscious software engineers who can contribute to the advancement in the field of computer science and engineering.

### **Department Mission:**

1. To equip the graduates with the knowledge and skills required to enable them to be industry ready.
2. To train socially responsible, disciplined engineers who work with good leadership skills and can contribute for nation building.
3. To make our graduates proficient in cutting edge technologies through student centric teaching-learning process and empower them to contribute significantly to the software industry
4. To shape the department into a Centre of academic and research excellence

### **Program Educational Objectives (PEO'S):**

#### **PEO-1:**

To provide the graduates with solid foundation in Computer Science and Engineering along with the fundamentals of Mathematics and Sciences with a view to impart in them high quality technical skills like modeling, analyzing, designing, programming and implementation with global competence and helps the graduates for life-long learning.

#### **PEO-2:**

To prepare and motivate graduates with recent technological developments related to core subjects like Programming, Databases, Design of Compilers and Network Security aspects and future technologies so as to contribute effectively for Research & Development by participating in professional activities like publishing and seeking copy rights.

#### **PEO-3:**

To train graduates to choose a decent career option either in high degree of employability/Entrepreneur or, in higher education by empowering students with ethical administrative acumen, ability to handle critical situations and training to excel in competitive examinations

#### **PEO-4:**

To train the graduates to have basic interpersonal skills and sense of social responsibility that paves them a way to become good team members and leaders.