Vamman Malik

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RESEARCH INTERESTS

Artificial Intelligence, Computer Vision, and Don't Know

EMPLOYMENT

2022- Currently Student

EDUCATION

2017 - 2021 B.Tech, Computer Science Engineering 6.06 / 10 (3.5 US scale)

2016 Senior Secondary Certificate (CBSE) (8.0 / 10)

PROJECTS AND RESEARCH

1. "F.R.A.Y – AI Mental Health Therapist"
   (Built a macOS/iOS AI therapist app with contextual memory, therapeutic responses, and session-based local+API logic [GPT-4, LLaMA 3.2])
2. "LexGuard AI – Legal Analyzer"
   (On-device iPadOS LLM with CoreML + OCR + clause-level risk highlighting for analyzing contracts [Gemma QLoRA])
3. "RESQ – AI Disaster Assistant"
   (Combines FEMA/NASA APIs + OpenAI for real-time rescue info. Generates visuals (DALL·E), location alerts, drone commands)
4. "Quantum Random Number Generator"
   (IBM Qiskit-based QRNG with delay choice and Ising simulations. Applied to dynamic password systems)
5. "GAN + Diffusion Vision Projects"
   (Fine-tuned SDXL and Runway ML for stylized image/video pipelines. Created WebAR visuals and GAN-based art)
6. "Shell-based GPT Chatbot"
   (A real-time shell script using GPT-3 (Davinci) API on macOS terminal to converse and handle prompts)
7. "Dynamic Password Generator"
   (Simulates a secure rotating password algorithm using Python + salt shuffling + interval updates)
8. "Paper Piano (Computer Vision, OpenCV)"
   (Gesture-triggered piano simulation with real-time hand detection. Built in Python, internship under Amity HCI Lab)
9. "NAS from Scratch (Academic)"
   (Built a secure Network Attached Storage prototype using Python and Linux shell, deployed on LAN router)
10. "Image Metadata Renamer"
    (Shell script using GPT-assisted prompts to extract EXIF data and rename images)

COURSES AND CERTIFICATIONS

1. "Introduction to Computer Science and Programming Using Python" from MITx. (2017)
2. "Introduction to Mathematical Thinking " (from Stanford University. Grade: 66.77
3. "Object Oriented Programming in Java, Microsoft" (2019)
4. "Learn to Program in Java" from Microsoft. (2019)
5. "Algorithms and Data Structures" from Microsoft. (2019)
6. "Data Science: R Basics" from Harvardx. (2021)
7. "Computer Vision - Object Detection with OpenCV and Python" from Coursera (2020)
8. "Introduction to Machine Learning" from Duke University. (2020)
9. "Deep Learning and Computer Vision A-Z: OpenCV, SSD and GAN" from Udemy. (2020)
10. "Coursera Project Network: HTML and CSS: Building a single-page website" Grade: 81.25
11. "Eduonix Learning solutions Congratules Building a 8-bit website" Project based course (2023)
12. "OpenCV Basics Computer Vision Course" by PyImage Search University (2023)
13. "Build your very first iOS app" Curtin University, Edx (2021)
14. "Prompt engineering with ChatGPT 4 and Midjourney" Udemy course, (2023)

PUBLICATIONS

2023 "Technology, TFPG, and Employment: A Panel Data Analysis" (with Arup Mitra)
Indian Journal of Labor Economics

2019 "Survey of literature on Measuring Logistics cost: A Developing Country's Perspective" (with Sanjib Pohit, DB Gupta, D. Pratap)
Journal of Asian Economic Integration

CERTIFICATIONS

1. "Deep Learning Specialization – Andrew Ng (Coursera, In Progress)"
2. "Intro to Mathematical Thinking – StanfordX"
3. "Intro to ML – Duke University"
4. "Computer Vision – Coursera + PyImageSearch"
5. "Build iOS App – CurtinX"
6. "Prompt Engineering with ChatGPT Midjourney – Udemy"
7. "Quantum Computing Basics – IBM Qiskit"
8. "HTML/CSS, OOP in Java – Microsoft / Coursera / Eduonix"

HONORS AND ACHIEVEMENTS

* "Winner – The Inquizzitives (Techinnovers 2020)"
* "Certificate of Excellence – TIMES NIE "Think Learn Challenge""
* "NASA Astronomy Olympiad, Green Olympiad (2011–2014)"
* "Merit Entry – Amity CS Program (Top 10 percent)"

RESEARCH AND PROFESSIONAL EXPERIENCE

A Novel Approach towards Cloud with Privacy (2020)

- Creating our own Network Attached Storage (NAS). NAS is basically an intelligent storage box that attaches directly to our home router. Sharing access to files like word documents and spreadsheets with your co-workers is kind of a plain job for NAS. It can be used to store your Family Photos, Music, Videos etc. in a safe, fast and accessible place (*with Prof. S.K. Dubey, School of Engineering and Technology, Amity University*)

Human-Computer Interaction (Paper Piano Project) - Summer Industry Internship (2020)

- The paper proposes to explore the rising field of Computer Vision and Gesture Recognition in Human-Computer Interaction by demonstrating a paper piano as a gesture controlled, computer- vision based *(with Prof. Prashant K. Gupta, School of Engineering and Technology, Amity University)*

In-House Practical Training: Dynamic Password Systems (2019)

- On a new kind of password security system in which a user enters the password, the system changes it into an encrypted form and thereafter dynamically shuffles each character after fixed intervals of time *(with Ms. Shruti Gupta, Institute of Forensic Sciences, Amity University)*

Artificial Intelligence (Term paper) (2018)

- The paper highlights the promising field of Artificial Intelligence and many advances in applications *(under the guidance of Ms. Divya Upadhyay)*

INNOVATION AND IP

- **AI LED SoC (PixelMind M1)** Drafted provisional patent
- **Structured Concept Model (SCM)** Graph-attention AGI prototype
- **MindMap Reasoner (LCM)** -style knowledge engine
- **Quantum Tarot + Oracle Tools***C*ultural interface prototypes

WORKSHOPS AND EVENTS

- **IEEE Jamia** AWS + AI
- **M2R Technovations** Internal Workshops
- **DSA CP** - Internal Workshop
- **Amity Youth Festival**- AI with Python
- **NGO Volunteering**- Oorja Foundation

TECHNICAL SKILLS

- Stata, Julia, MATLAB, Python, Java, Microsoft Excel , C, C++, Microsoft Excel, Word, and PowerPoint, ,OpenCV Using Python, Basics of Swift programming language, Basic Level Shell Script, Front-End Web Development, HTML, JS and CSS, LaTeX

Updated: July 2025