Arpan Mathur

Chandigarh, India | +91 9815533778 | arpanmathur18@gmail.com | linkedin.com/in/arpan-mathur-05a83b278

Professional Profile

B.Tech Computer Science student specializing in AI & ML. Seeking a Data Science Internship at Microsoft to apply applied machine learning techniques and statistical analysis to build customer-centric products. Focused on using data exploration to solve real-world engineering problems.

Education

- **B.Tech in Computer Science (AI & ML)**, VIT Bhopal University, Madhya Pradesh, India
- Achieved **CGPA 9.1/10**, Expected Graduation: July 2027
- **Class 12th (CBSE)**, SGGS Collegiate School, Chandigarh, India | Earned **85%**, Completed: 2023
- **Class 10th (ICSE)**, St. Xavier's High School, Panchkula, Haryana, India | Secured **92.4%**, Completed: 2021

Technical Skills

- Languages: Python (Pandas, Scikit-Learn, NumPy), SQL, Java, C++.
- Frameworks & Tools: Machine Learning, TensorFlow (familiar), Mistral 7B, NumPy, Pandas, Flask, Git
- Concepts: Machine Learning, Neural Networks, Data Structures, Algorithms, Cloud Computing, Exploratory Data Analysis (EDA), Model Evaluation, Supervised Learning, Statistics, NLP
- AI-Augmented Development: Prompt Engineering, AI-Assisted Prototyping (LLM-based Debugging).
- **Soft Skills:** Prompt Engineering, Problem-Solving, Effective Communication, Adaptability, Critical Thinking, Leadership, Initiative
- **Language Proficiency**: Hindi (Native), English (Fluent), Punjabi (Beginner)

Projects

Skill Gap Analyzer | June 2025 | GitHub | Live
- Created a web tool to identify and address professional skill gaps through personalized recommendations.
- Enabled users to assess current skills and receive tailored learning paths, improving career development efficiency.
- Deployed a user-friendly interface with data visualizations to highlight skill trends for 10+ users.

Conversational AI System (Samantha AI) | Python, LLMs, Flask | Mar 2025 – June 2025 | Github
- Engineered a scalable conversational AI with speech recognition, TTS, and Mistral 7B, featuring machine learning-based mood tracking, empathetic responses, and personalized jokes/quotes via APIs. Leveraged AI-assisted development to rapidly prototype and iterate on system architecture, reducing initial development time.
- Integrated distributed systems for Google API email/calendar management and app launching (e.g., Browser, VS Code) on achieving 85% accuracy in sentiment analysis.

AI-Powered 2D Game Generator | Python, Machine Learning, Pygame | Jan 2025 – May 2025
- Designed a personal software engineering project using Stable Diffusion to generate 2D game levels, optimizing programming skills to reduce generation time by 25%.
- Explored creative applications of machine learning in game development, enhancing technical depth in scalable systems.

Future Forge: Educational Guidance Platform | Python, Gemini API, MySQL | Sep 2024 – Dec 2024
- Built a scalable software application for personalized academic advice, optimizing system design to improve query response time by 30% and achieving 95% accuracy in 300+ simulated queries.
- Led team collaboration on back-end integration for a 5-member team, ensuring scalability with HTML/CSS frontend.

Experience

VITian Formula Racing, Aerodynamics Department | Head of Department | Jan 2025 – Present
- Leading an expanding 12-member team in aerodynamic simulations using ANSYS Fluent, developing technical solutions for vehicle designs targeting FSAE Supra India 2026.
- Coordinated distributed systems with CFD and CAD (SolidWorks) workflows, improving design efficiency by 15% through sustainable materials.

Certifications

- IBM AI Engineering Professional Certificate, Coursera (In Progress, Expected 2026)
- NPTEL Cloud Computing Course, NPTEL
- Applied Machine Learning in Python, University of Michigan (Coursera) | Dec 2024

Extracurricular Activities

- **Entrepreneurship Cell (E-Cell), VIT Bhopal (2024 – 2025)**
- Organized E-Summit 25, coordinating 5 workshops, improving team collaboration
- **Google Olympics, VIT Bhopal (Feb 2025)**
- Won 3rd place in coding competition.
- **Gen AI Exchange Program by Google | Participant (March 2025)**
- Collaborating in Google's 6-week program, developing innovative solutions for social impact, enhancing team collaboration.
- **PromptX Hackathon, CSI Student Chapter, VIT Bhopal | Participant | March 2025**
- Competed in an online hackathon, earning a certificate for developing a solution, demonstrating rapid problem-solving and technical depth.
- **NSS, VIT Bhopal**
- Tree Plantation, Aug 2024: Supported sustainability.
- Blood Donation, Dec 2024: Aided community health.
- **Workshops**
- Robotics, Robonauts India, Sep 2023: Gained robotics skills.
- Edgetronix, Vitronix Club, Oct 2023: Explored tech trends.