Ansh Pethani

+91-9820863458 | **anshpethani@gmail.com** | **LinkedIn** | **Github**

EDUCATION

Vellore Institute of Technology, Vellore, IN   **Sept 2021 - June 2025**
Bachelor of Technology in Information Technology   *CGPA: 8.84/10*
- *Relevant Courses: AI, ML, Cloud Computing, Software Development, Big Data, Soft Computing, Computer Networks, DBMS, DSA, OS, Information Security, Cyber Security, Computer Architecture*

RESEARCH PUBLICATIONS

- Pethani, A., Nallakaruppan, M.K. (2024). Electronic Copyright and Legal Application Regarding Non-Fungible Tokens (NFTs). In: Bhattacharyya, S., Das, G., De, S., Mrsic, L. (eds) Recent Trends in Intelligence Enabled Research. DoSIER 2023. Advances in Intelligent Systems and Computing, vol 1457. Springer, Singapore. [Link]
- Nallakaruppan M K, Pethani, A., & Pelusi, D. (2024). Data Security in the Age of Marketing: Safeguarding Customer Information and Compliance. In Data Engineering for Data-Driven Marketing (Accepted for publication, Emerald Publishing).

INTERNSHIP EXPERIENCE

Python Development Intern, *DeepKlarity* (Remote)**,** India   **Sep 2024 - Present**
A technology company that provides solutions for data analysis, automation, and predictive insights using generative AI
- Designed and optimized backend APIs using FastAPI and Python, tested with Postman, and integrated with frontend interfaces using React and JavaScript to enhance automation features
- Developed generative AI-driven chatbots, including a blog-generation bot and an RAG pipeline chatbot capable of interpreting text, docs, PDFs, and image files for Q&A, with an additional image-to-text feature

Project Intern, *Hueb* (Remote)**,** NY, USA   **Nov 2023 - Dec 2023**
A jewelry company based out of New York, USA, focusing on e-commerce & technological expansions
- Verified, tested, and optimized the functionality of a Unity-based iOS application, reducing loading time by 45% and improving performance
- Updated and optimized the admin interface for better efficiency in visual component edits and scalability
- Refined joystick and movement controls, enhancing the usability of the app

IoT Systems & Research Intern, *L&T Technology Services***,** Mumbai, IN   **Sep 2023 - Nov 2023**
A multinational technology company that provides engineering research & development services
- Explored IoT Systems; ELV Packages (CCTV, PAS, FAS, BMS, HVAC, ICCC), and Digital System Integration.
- Created a CRM database of 600+ potential clients, leading to 6 successful outreach & sales pitches for IoT solutions

KEY PROJECTS

- **IDS Attack Detection in IoV CAN Bus (2024):** Evaluated 12 ML and DL models on a 1.4M-instance IoV dataset, applied SMOTE for class imbalance and optimized for accuracy and efficiency. *Tech Used:* Python, Tensorflow, Scikit-learn, Imbalance-learn, Pandas, NumPy
- **Parkinson's Disease Prediction Project (2024):** Applied ten ML models on UCI's Parkinson's Disease dataset, used feature selection and SMOTE, and identified Random Forest as the most accurate predicting algorithm. Improved accuracy from 55% to 85%; *Tech Used:* Python, Scikit-learn, Imbalance-learn, Pandas, NumPy
- **Real-Time Analysis (2024):** Developed a data processing app to analyze web-scraped data at 5-second intervals, featuring automatic graph visualizations as new data batches were received; *Tech Used:* Python, PySpark, Hadoop
- **Socket Programming Chat App (2023):** Developed an application in Python using Socket, enabling communication between multiple systems on the same network via TCP protocol.
- **Unmanned Ground Rover (2023):** Developed Python code for camera integration with recording/real-time feed, using Arduino and Jetson. Set up an AI model for snake detection via image processing
- **ISMAFDS (2023):** Developed a website for the International Symposium on Mathematical Analysis of Fractals & Dynamical Systems at VIT Vellore from a template; *Tech Used:* HTML, CSS, JavaScript, Bootstrap, Jquery

ADDITIONAL INFORMATION

- **Programming Languages:** Python, Java, C, C++, JavaScript, HTML, CSS, SQL, PL/SQL
- **Frameworks/Tools:** Git, Tensorflow, Scikit-learn, Imbalance-learn, Pandas, NumPy, Gemma2, Ollama, Llava, Tesseract, ChromaDB, Flask, Android Studio, AngularJS, JQuery, Arduino, Jetson, Linux, Generative AI, Visual Studio Code, Postman, Cisco Packet Tracer, Wireshark, PostgreSQL
- **Leadership & Community Service:**
  - **Member,** *VTech Core* **(2023 - Present):** Led the tech team in developing VIT-related browser extensions, managing junior members & overseeing coding, debugging & optimization
  - **Member**, *VITrendz* **(2022 - Present):** Contributed to the onscreen & content team for a 26k-follower social media account, creating & acting in content, editing reels and YouTube videos, and producing memes
  - **Volunteer,** *Jiv Daya & NGO* **(2024):** Volunteer for an animal shelter, contributing to their housing, feeding, and care. Supported efforts to save truckloads of animals from slaughterhouses
- **Achievements:** Semifinalist in Code Gladiators by TechGig (2023); 2nd place in PowerXcel Ideathon by IEEE-PES VIT (2023); 2nd place in Techfusion 1.0 Hackathon by VTECH VIT (2023); Introduction to PHP Simplilearn (2024)
- **Interests:** Cooking, Fitness, Sports, Travelling; **Languages:** English, French (Intermediate), Hebrew (Basic)