Vatsal Jha

B.Tech - CSE with Specialization in IoT
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Github | GoogleScholar
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ACHIEVEMENTS

- **Raman Research Award -** received 10,000 cash prize for published research from VIT $\qquad$ 2024
- **National Topper** among 10749 participants, AI for Investment- IIT Kanpur $\qquad$ 2024
- **National Topper** among 6455 participants, Reinforcement Learning- IIT Madras $\qquad$ *2023*

WORK EXPERIENCE

- **Samsung PRISM R&D Internship** | *SRI Bangalore* $\qquad$ *Oct. 2024 – Present*
  - Working on building Generative AI systems for low-latency multilingual support.
- **Intern** | *Council of Energy, Environment and Water* $\qquad$ *Jun. 2024 – Aug. 2024*
  - Cleaned & Clustered 92000 documents into 350 interpretable topics, **to be used in a public policy report.**
  - Developed ML-based Bias Correction for AQI Chemical Forecast Models, **reducing error by 80%.**
  - Designed Modular Prototype for Solar Optimization for **over 6 cell configurations, under 1.5 months.**
- **AI Research Intern** | *NTNU Norway and BITS Pilani* $\qquad$ *Mar. 2024 – Present*
  - Developing Lexicon-Free Computer Vision Models for Document Analysis.
- **Robotics Engineer Internship** | *Wingway Autonomy* $\qquad$ *Dec. 2023 – Feb. 2024*
  - Worked on fine-tuning the robot parameters, and preliminary controller and planner algorithms.
- **ML Intern** | *King Saud University, Riyadh and VIT, Vellore* $\qquad$ *Dec. 2022 – Feb. 2024*
  - Created a Machine Learning model to predict SoC consumption for electric two-wheelers in diverse Indian road conditions with **an accuracy of 99.71%.** Research sponsored by **Royal Academy Of Engineering and published in Journal of Energy Storage (Impact Factor 8.9).**

PROJECTS

- **Traffic Optimization System for Karnataka Police (Github Link)** $\qquad$ *Feb. 2024 – Jun. 2024*
  - Used RL in SUMO to optimize Network Traffic, **reducing waiting time by 50%,** ranking as a **Top 3 Finalist in KSP Hackathon.**
- **Narad (Github Link)** $\qquad$ *Dec. 2023 – Jan. 2024*
  - Multilingual voice-activated chatbot with a contextual-bandit recommender, with **sub-10 ms query time.**
  - Won the **1st Prize** in **IISF-SIF Hackathon** conducted by ISRO and **Samsung-PRISM Hackathon.**
- **Natural Language and Audio Processing (Github Link)** $\qquad$ *June 2023 – Present*
  - Fine-tuned LLMs for dialogue summarization, detoxification (Flan-T5 with RLHF), sentiment analysis (LSTM), translation, QA (attention-based), and TTS.

SKILLS

- **Programming**: SQL, C, C++, Java, Python, Latex
- **Frameworks**: HuggingFace, PyQt, OpenAI Gym, Keras, PyTorch ,Tensorflow, Scikit-learn, Numpy, Pandas, ROS
- **Software Skills**: Origin, MATLAB, Linux, Jupyter Notebooks, Kaggle, Figma

EDUCATION

Degree/Certificate	Institute/Board	CGPA/Percentage	Year
B.Tech. CSE	Vellore Institute of Technology, Vellore	9.27 (Current)	2022-Present
Class 12	St. Xavier's School, ISC Board	96%	2020-2022

KEY COURSES TAKEN

- **Programming**: Algorithms, Data Structures, Object Oriented Programming, Web Programming
- **Certifications:** Huggingface DeepRL, Generative AI with LLMs, Machine Learning A-Z, Reinforcement Learning-IITM, AI for Investment-IITK , Introduction to Quantum Computing– IBM and IITM , Recommender Systems-IITKGP

POSITIONS OF RESPONSIBILITY

- **Team Lead and Founder,** *Prometheus VIT* $\qquad$ *May. 2024 - Present*
  - Started an inter-disciplinary robotics team of over 20 members, leveraging AI to participate in RoboCup 2025.
- **Vice Chairperson,** *Youth Red Cross, VIT Vellore* $\qquad$ *Jan. 2024 - Present*

EXTRACURRICULARS

- **Volunteering:** Youth Red Cross | Nature Lover's Club
- **Cultural and Technical:** Robovitics | DebSoc | Spectrum | Anchoring Club | VGT 2nd Place 2023(Music)