VISHNU NARAYANAN A

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EDUCATION

Florida International University Miami, Florida
PHD student, Computer Science Jan 2025 – Present
- CGPA: 4/4

Indian Institute of Information Technology, Kottayam Kottayam, Kerala
B.Tech (Hons.), Computer Science and Engineering Aug 2019 – May 2023
- CGPA: 8.82/10.0

PUBLICATIONS

1. Vishnu Narayanan Anilkumar, R. M. Lincy G, P. Gopakumar. *Reinforcement Learning based Energy Management System for Hybrid Electric Vehicles.* 3rd International Conference on Advances in Computing, Communication, Embedded and Secure Systems (ACCESS), 2023, pp. 202–208. DOI: 10.1109/ACCESS57397.2023.10200701.

2. V. Narayanan, S. Kunjachan, K. S. *Understanding Cloud Structures from Satellite Images using Deep Learning.* International Conference on Computer, Electronics & Electrical Engineering & their Applications (IC2E3), 2023, pp. 1–6. DOI: 10.1109/IC2E357697.2023.10262521.

3. Rubell Marion Lincy G, Som Sagar, Vishnu Narayanan, Dhanush Binu, Nevin Selby, Sheba Elizabeth Thomas. *Advantage Actor-Critic Reinforcement Learning with Technical Indicators for Stock Trading Decisions.* SSRN preprint, 2023. DOI: 10.2139/ssrn.4596132.

EXPERIENCE

Research Assistant Jan 2025 – Present
Florida International University (FIU)
- Robotics transfer learning research (DARPA-funded): performed transfer learning from Habitat Sim to Isaac Sim.
- Multimodal Explainable AI (XAI): conducted a strong literature survey and exploring ideas toward a top-tier publication.
- Fine-tuning (PEFT/LoRA-style) and edge fine-tuning: completed a thorough literature study; writing an interdisciplinary survey.
- LLM agents: evaluate privacy/security decision quality in tool-augmented agents across realistic web workflows.

Growth Analyst Intern Jun 2022 – Dec 2022
Shipsy
- Analyzed strategy processes and proposed improvements for execution efficiency.
- Worked with co-founders on cold-calling setup and workflows.
- Built Excel-based reporting using database exports.

Data Analyst Intern Feb 2022 – Aug 2022
Aero Telcom Solution Pvt Ltd
- Built web-scraping pipelines for government tenders/legal data; preprocessing and cleanup.
- Scraped 40+ websites and standardized datasets for downstream analysis.
- Tools: Pandas, Selenium, BeautifulSoup, Matplotlib.

Blockchain Intern May 2021 – Aug 2021
UST Global
- Prototyped land-registration tokenization using Ethereum smart contracts.
- Implemented Solidity backend and integrated Web3 frontend flows.
- Tools: Truffle, Ganache, Remix, ERC tokens.

PROJECTS

Relationship-Aware Safety Unlearning for Multimodal LLMs   Sep 2025 - present

- Designed relationship-level unlearning to suppress unsafe object–relation–object tuples while preserving safe contexts.
- Built a graph-based representation and developed targeted fine-tuning/parameter-editing with counterfactual preservation.
- Evaluated unlearning using CLIP text–image embedding cosine similarity and qualitative inspection for utility preservation.

RL-based Energy Management for Hybrid Electric Vehicles   Aug 2022 – Apr 2024

- MATLAB/Simulink/Simscape simulation; RL loop connected via UDP.
- Explored DQN variants and Q-learning for dynamic/random driving conditions.

Automated Stock Trading using Advantage Actor-Critic   Sep 2022 – Present

- Built an A2C-based trading agent with a feature pipeline of technical indicators
- Designed the environment and reward to reflect realistic trading objectives and implemented backtesting for episode-based evaluation.
- Ran ablations across indicator sets and key hyperparameters.

BoroMap – online tool for lending and borrowing   Apr 2021 – May 2021

- Web app using React, MapboxGL and MongoDB for lending/borrowing items.
- Used geolocation API and directions API for location/distance.

RESEARCH INTEREST

Agentic AI, Explainability, Post-Training Techniques in LLMs, Generative AI, Edge AI, LLM Security and Privacy

AWARDS AND HONORS

- **1st Place**, Intra IIIT-K Hackathon – Hackoona Matata   2022
- **Prime Minister's Scholarship**, Government of India   2019–2023
- **Bronze medal**, Shot put, All India Inter-IIIT Sports meet   Feb 2020

LEADERSHIP

- **Mentor**, Sportec (sports club of IIIT Kottayam)   Aug 2021 – Aug 2022
- **Class Representative**, Batch 2019 CSE department   Aug 2019 – Aug 2023
- **Student In-charge**, ICITIIT'20   Feb 2020

SERVICE

Reviewer: *International Conference on Learning Representations (ICLR) 2026*
USENIX Security Symposium (USENIX Security) 2025
USENIX Security Symposium (USENIX Security) 2026
ACM CHI Conference on Human Factors in Computing Systems (CHI) 2025

SKILLS

Programming Languages: Python, C++, C, SQL, JavaScript

Frameworks: PyTorch, TensorFlow, Keras, NumPy, Pandas, scikit-learn, Transformers, PEFT, bitsandbytes, Accelerate, Diffusers, Stable Baselines, Gymnasium, Gradio, Captum, SHAP, Integrated Gradients (IG)

Development Tools: Visual Studio Code, Jupyter, Android Studio, Git, Conda, Docker

Databases,Web and Cloud : SQL, MongoDB, AWS, Firebase, React, Django, Flask

CONFERENCES / CERTIFICATES

- IC2E3-2023 (International Conference on Computer, Electronics and Electrical Engineering and Their Applications).
- ACCESS-2023 (International Conference on Advances in Computing, Communication, Embedded and Secure Systems), IEEE Kerala Section.
- Google Cloud Engineering track in 30 Days of Google Cloud Program