Varad Kulkarni

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Education

Vishwakarma Institute of Technology Pune   Nov 2022 - May 2026
Bachelor of Technology in Computer Science (GPA: 8.61 / 10.00)   *Pune, Maharashtra*
- **Relevant Coursework:** DSA (Java), MERN Stack, Computer Networks, DBMS, LLM's

Experience

Indian Institute of Tropical Meteorology (IITM)   Pune, Maharashtra
Research Intern   *June 2025 – Present*
- Working on fine-tuning large language models (LLMs) to interpret and synthesize complex weather datasets for improved climate analysis and forecasting.

BMC Software   Pune, Maharashtra
Technical Analyst Intern   *January 2025 – June 2026*
- Worked on Linux, Networking, Docker, and SQL to analyze technical issues and deliver solutions.

Publications/Achievements

- Patent Published for **Hybrid Routing Emergency Mesh Network System For Disaster Communication**: A decentralized communication system enabling real-time connectivity using hybrid mesh routing.

- Winner (3rd Place): Business and System Innovation Challenge 2024, Indonesia: **Developed an anti-plagiarism software prototype for Binus University, Indonesia**

- Scopus Publication for the Paper Titled "Image Forgery Detection Using Machine Learning": **8th International Conference on Smart Trends in Computing and Communications (SmartCom'24) - 2024**

Projects

AcademAI | *React.js, FastAPI, MongoDB, Python SDK, Gemini-2.0-Flash*
- A full-stack research paper generator powered by LLMs that takes a GitHub repository link and user prompt as input, analyzes the codebase, and generates a structured research paper.
- Designed for students and researchers to automate technical documentation and research drafting.

Mesh-Up | *ESP8266, Java, Android Studio*
- A decentralized mesh network enabling communication without traditional infrastructure like Wifi and Mobile Data, using IoT devices, laptops, and mobiles. It features UDP-based messaging, rebroadcasting, and flood protection for reliable and efficient communication.
- Designed for disaster recovery, remote areas, and events, it ensures real-time connectivity when infrastructure is unavailable.

Technical Skills

Languages: React Native, C, Java, SQL, Python, Git, Arduino, Android, Solidity
Web Development: MERN Stack, JavaScript, HTML, CSS
Operating Systems: CentOS Linux, Docker (Containerization and Deployment)

Volunteering Experience

Microsoft Learn Students Club VIT Pune   Pune, Maharashtra
Core Board Member   *January 2024 – May 2025*
- Organized a 24-hour offline National hackathon at VIT Pune.
- Built an NGO website to enhance outreach and streamline donations.