Amogh E M

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Education

PES University   *Bengaluru, India* | Sept 2027
  BTech in Computer Science (AIML)   GPA: 8.11/10.0
  Coursework: Software Engineering, Object-Oriented Programming, Data Structures & Algorithms, Networks, Discrete Math, Linear Algebra, Probability & Statistics, Calculus

Skills

Languages: C/C++, Python, Java, JavaScript/TypeScript, HTML/CSS, SQL
Tools: Git/GitHub, Unix/Linux, Flask, React, Next.js, Nest.js, django, FastAPI, Docker

Experience

ISFCR PESU | *Technical and CTF team head*   *Bengaluru, India* | Sept 2023 – July 2025
- Oversaw the operations of technical departments within the Center.
- Participating in several international and national-level CTFs as a part of PESU ISFCR.
- Pentesting using many tools in linux.
- Organized many workshops and CTFs
- Teaching Assistant for Mtech Ethical hacking Course.
- Research Trainee

Projects

TrustLedger | Hyperledger fabric, Go, IPFS, Nextjs, Express, React   June 2025
- Application to **store evidence** files in **IPFS** and **blockchain**
- Implemented file stored in **IPFS**
- Used **Hyperledger fabric network** to set up a **private blockchain.**
- Developed **JWT-based authentication** and a **MongoDB-backed API** for secure user and event management.

Stock Simulator | *JavaScript, React, Express (Node.js) , Yahoo finance API*   Oct – Nov 2024
- **Stock Trainer**, a stock market simulator using **Yahoo Finance API** for real-time data and virtual trading.
- Implemented **risk-free trading, watchlists, and portfolio tracking** to help users practice investing.
- Built **advanced charting tools** for technical analysis, enabling informed decision-making.

Optilink | *opencv, dlib, gemini API*   Feb 2025
- Developed an **assistive typing application for ALS patients** using **eye movement tracking and AI-powered predictive text**, enabling efficient and accessible text input.
- Collaborated in building a **real-time gaze detection system** with **dlib** and **OpenCV**, allowing users to control text input through eye movements.
- Integrated an **emotion-based TTS feature** and **Google Gemini API** for **emotion detection and AI-driven text prediction**, enhancing communication and typing efficiency.

RoadSafe | *opencv, keras, sklearn, websockets (python)*   Feb 2024
- Developed a **road safety tool** with **drowsiness detection, accident SOS, and pothole detection**, using **OpenCV, Keras, and scikit-learn** for real-time monitoring and alerts.
- Collaborated in developing the **accident detection model**, **SOS** and handling of **websockets**.

Awards and Certifications

Indomitus CTF MIT Manipal 2025   Mar 2025
- 5th / 21 teams; Represented PES University in a national level CTF

PES ISFCR CTF 2024   Nov 2024
- 3rd / 120 students in a ctf organized by ISFCR in PESU

Genesys | Optilink   Feb 2024
- 6th / 342 teams, Genesys Hack 2025

Code of Honour | RoadSafe   Feb 2024
- 3rd / 322 teams, Road safety Hack 2024

Intel's AI course certified   Jan 2022 - Feb 2022

Extracurriculars

VALORANT Champions | *Transcendence, SJCC 2024*   Aug 2024
- 1st Place; Led the team with training plans, coordinating matches, etc.