

Ashutosh Mahapatra

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EDUCATION

Siksha 'O' Anusandhan University (ITER)
Bachelor of Technology in Computer Science Engineering

Nov 2021 – June 2025
CGPA: 9.85

EXPERIENCE

Software Engineer Intern
Samsung R&D Institute

June 2024 – Dec 2024
Bangalore, India

- Developed a static power analysis tool to identify performance bottlenecks and reduce power inefficiencies by 10%, leveraging in-house GenAI for optimization suggestions.
- Engineered an industry-first ground truth generation framework for ARM, achieving 91% accuracy in per-instruction energy measurement, with support for both hardware and software modes.
- Automated the build process using CMake, reducing compilation time by 70%.
- Created an automation suite using Python and Java for capturing and analyzing per-instruction power consumption, reducing ground truth creation time by 90%.

Software Developer Intern
Aveti Learning Pvt. Ltd.

Sep. 2022 – May 2024
Bhubaneswar, India

- Developed a cross-platform AI tutor bot for mobile and web using Flutter, leveraging Langchain and OpenAI GPT-4 as a backend service.
- Integrated vector search, and Retrieval-Augmented Generation (RAG) for question answering (QA) in chatbot
- Built and orchestrated asynchronous RESTful APIs with FastAPI, hosted on AWS EC2, and secured scalability using NGINX
- Architected microservices for PowerPoint-to-video conversion using serverless AWS Lambda with SQS (messaging queue), reducing operating costs by 90%
- Optimized CI/CD deployment pipelines using GitHub Actions, reducing deployment time by 50%.

PROJECTS

Passlock & PasslockDesktop | *Python, Firebase, Kivy, PyInstaller, Github Actions* Jan. 2022 – June 2022

- Created a cross-platform password manager for mobile and desktop (Android, Linux, Windows, MacOS).
- Leveraged Firebase real-time database for efficient CRUD operations.
- Implemented AES-256 encryption to ensure robust password security and decryption.
- Designed real-time password synchronization system across devices with 0ms latency.
- Optimized app load time by 30% implementing lazy loading technique.

Plant Doctor | *Flutter, Python, Flask, AWS, PyTorch*

Feb 2023

- Collaborated with a team of four in a 36-hour hackathon to create a plant health monitoring solution.
- Designed and deployed ResNet ML model to achieve 90% accuracy rate in detecting plant diseases.
- Implemented offline (Raspberry Pi) and cloud-server data collection for 100% coverage.

SKILLS

Languages: Python, Java, C, C++, Dart, Assembly, LaTeX, Golang

Frameworks: Flutter, FastAPI, Flask, Kivy, Langchain, PyInstaller, NumPy, Pandas

Tools and OS: Linux, UNIX shell, Bash, Git, SSH, Github Actions, Nmap, Wireshark

Cloud Platform & Containerization: Google Cloud Platform, Amazon Web Services, Docker, Kubernetes

Databases: Oracle DB, PostgreSQL, MySQL

ACHIEVEMENTS

Finalist in JP Morgan Chase **Code For Good**

Secured **4th** rank in Capture The Flag contest conducted by NIT Rourlkela

Rated 1762 (Max) in [Codechef](#)

Rated 1696 in [Leetcode](#)

Rated 1232 (Max) Pupil in [Codeforces](#)