

# 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

June 2024 – Dec 2024

*Samsung R&D Institute*

*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

Sep. 2022 – May 2024

*Aveti Learning Pvt. Ltd.*

*Bhubaneswar, India*

- Contributed to building an EdTech platform that reached 2700+ schools and 200K+ students, enhancing digital learning in vernacular languages to bridge the quality gap and empower learners to compete globally.
- Developed a cross-platform AI tutor bot for mobile and web using Flutter, integrating Langchain, OpenAI GPT-4, vector search, and Retrieval-Augmented Generation (RAG) for enhanced question answering (QA).
- Architected microservices for PowerPoint-to-video conversion using serverless AWS Lambda with SQS (messaging queue) and S3 for storage, reducing operating costs by 90%.
- Built and orchestrated asynchronous RESTful APIs with FastAPI, hosted on AWS EC2, and secured scalability using NGINX.
- 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.

### JalDristi (Smart India Hackathon) | *Flutter, Python, FastAPI, AWS, MySQL, ReactJS*

Sep. 2023

- Spearheaded a team of 6 during a 24-hour hackathon, developing a crowdsourced water-monitoring system.
- Utilized Flutter and employed the Provider package for state management to craft a Neumorphic and Stateful UI.

## 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, Jupyter Notebook

**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 Rourkela

Rated 1762 (Max) in Codechef

Rated 1713 in Leetcode

Rated 1232 (Max) Pupil in Codeforces