

# Ashutosh Mahapatra

[ashutoshmahapatra.13014@gmail.com](mailto:ashutoshmahapatra.13014@gmail.com) | [LinkedIn](#) | [GitHub](#)

## 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 code analyzer to estimate energy consumption for C/C++ programs by analyzing ARM assembly.
- Engineered a ground truth generation framework, achieving 91% accuracy in energy measurement per instruction.
- Created an automation suite using Python and Java for capturing and analyzing per-instruction power consumption, reducing ground truth creation time by 90%.
- Developed a static power analysis tool, enabling identification of performance bottlenecks, reducing power inefficiencies by 30% in analyzed programs.

### 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 information retrieval, vector search, and Retrieval-Augmented Generation (RAG) for question answering (QA) in an AI tutor 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.

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

**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 1696 in [Leetcode](#)

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