

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 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](#)