Ashutosh Mahapatra

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EDUCATION

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

Nov 2021 – May 2025
CGPA: 9.8

EXPERIENCE

Software Development Intern
Aveti Learning Pvt. Ltd.

Sep. 2022 – May 2024
Bhubaneswar, India

- Developed a cross-platform AI tutor bot mobile and web application using Flutter ensuring responsiveness; utilizing OpenAI GPT-4 model through Langchain as a backend service to enhance chatbot functionality.
- Orchestrated asynchronous RESTful APIs hosted on AWS EC2 with FastAPI and employed NGINX for scalable web server.
- Engineered micro-services architecure for translating and converting PowerPoint slides to videos within 2-month timeframe, leveraging Docker on server-less AWS Lambda functions with SQS reducing operating cost by 90%; Integrated DynamoDB and CloudWatch for request status and error detection.
- Optimized the deployment processes through CI/CD pipeline and achieved a 50% time reduction via automation with Github Actions.

Software Engineering Intern
Samsung R&D Institute

June 2024 – Present
Bangalore, India

- Built a static code analyzer to estimate energy consumption for C/C++ by analyzing ARM assembly.
- Generated ground truth for energy per instruction, achieving 90% accuracy using hardware and software-based measurements.
- Identified key instructions, functions, and code segments with high energy consumption to optimize performance.

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, HTML, CSS, Assembly, LaTeX
Frameworks: Flutter, FastAPI, Flask, Kivy, Langchain, PyInstaller, NumPy
Tools and OS: Linux, UNIX shell, Bash, Git, SSH, Docker, Github Actions, Nmap, Wireshark
Cloud Platform: Google Cloud Platform, Amazon Web Services
Databases: Oracle DB, PostgreSQL, MySQL

ACHIEVEMENTS

Rated 1762 (Max) in Codechef
Rated 1667 in Leetcode
Rated 1232 (Max) Pupil in Codeforces
Secured **4th** rank in Capture The Flag contest conducted by NIT Rourlkela