

Anal Jyoti

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EDUCATION

Indian Institute of Technology Kharagpur
CGPA 7.78/10

Kharagpur, West Bengal
Dec. 2020 – May 2025

EXPERIENCE

CompilerAI

May 2024 – July 2024

SDE Intern

Delhi, India

- Worked on a VS Code extension called EqCheck with a frontend written in TypeScript and a backend in Node.js
- The purpose of the extension is to check equivalence between a C file and its corresponding assembly file or O file
- Enhanced the Node.js server to support Windows in addition to Linux, expanding the user base by 50 percent
- Utilized Visual Studio's Makefile utility to enable the compilation and proof analysis for more than one C file

Zoko

Dec. 2023 – Jan. 2024

SDE Intern

Bangalore, India

- Created a landing page using ReactJS and GSAP with optimized scroll animations for a smooth user experience
- Built horizontal scrolling component with scroll animations triggered by viewport visibility using API-driven data
- Designed a landing page in Figma to enhance user experience, driving visitor signups with modern design elements

PROJECTS

Heartbeat Anomaly Detection (Link)

To develop a deep learning model for the detection of heartbeat anomalies using stethoscope and mobile phone recordings

- Developed a CNN pipeline converting heart sounds to spectrograms for accurate detection of heartbeat anomalies
- Improved classification by optimizing preprocessing of heart sounds from mobile and stethoscope recordings
- Achieved 84% accuracy in detecting normal vs. abnormal heartbeats using MFCC features from spectrograms

Dijkstra Algorithm-based Maze Solver (Link)

To scan black-and-white maze images with obstacles; take user input for start and end points to find the shortest path

- Engineered a maze solver using OpenCV and Dijkstra Algorithm to achieve a computational efficiency of 90%
- Replicated the algorithm used by Google Maps to find the shortest path connecting 3 or more points on the maze
- Prepared a detailed report on using algorithms like BFS and DFS for finding the shortest path between two points

CODING COMPETITIONS

- Reached expert(1609 rating) on Codeforces (id: less_than_green) and 4*(1903 rating) on Codechef (id: ajsingh176)
- **Codechef:** Secured global rank 158 and 279 in starters 147 and 144, respectively, out of 12000+ participants
- **Codeforces:** Obtained global rank of 114 and 364 in rounds 993 and 994, respectively, out of 15000+ participants
- **Google Farewell 2023:** Secured global rank 498 in round A and 711 in round B out of 6000+ contestants
- **Meta Hacker Cup 2024:** Secured global rank 1793 in round 1 and 2472 in round 2 out of 22000+ competitors

SKILLS

Languages: C++, C, Python, HTML, CSS, Javascript, Typescript, C#, MongoDB, LaTeX

Libraries/Frameworks/Tools: C++ STL, Node.JS, Express.JS, React, OOPs, GitHub, Visual Studio

EXTRACURRICULAR ACTIVITIES

Kshitij, IIT Kharagpur

May 2022 – April 2023

Core Organizing Team Head

Kharagpur, West Bengal

- Managed a team of 22 Core Organizing Team Members for the successful conduction of the fest in offline mode
- Affiliated Kshitij with 2 certifications and 2 associations (IEEE, IEIA, CSI, and aIAI) for the successful conduction
- Partnered with HackerRank as platform partner for the coding competition Overnite, which attracted 800+ teams
- Organised the Exhibition by ISRO, and Tech Mahindra, and the Auto-Expo by Benelli, Jawa, Toyota, and TVS