Asish Kumar Mandoi

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Asish Mandoi
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Education

Year	Degree/Certificate	Institute	CPI/%
2019 - 2023	B.Tech in Electrical Engineering	Indian Institute of Technology Kanpur, India	7.1/10
2019	Standard XII (CBSE Board)	MBS Public School, Bhubaneswar, India	93.8%
2017	Standard X (CBSE Board)	DAV Public School, Bhubaneswar, India	10/10

Projects

IITK-Coin *May '21 – Jul '21*
Backend of a pseudo-currency system to be used in the IITK campus | Programming Club, IIT Kanpur *Report, GitHub*

- **Developed the backend** from the ground up using **Go** programming language and **SQLite** for database management
- **Secured** the endpoints by incorporating user authorization using **JWT**s, and built an **additional layer of protection against hacks** by employing the **Bcrypt** algorithm to **hash and salt passwords**
- Added a **transaction tracking** functionality for administrators and implemented an **OTP based confirmation system**
- **Increased server efficiency** by handling up to **300 concurrent transactions per second** by utilizing the **WAL** journal mode in SQLite and **Redis** for caching

Algorithms based on Maths *Apr '21 – Jun '21*
Stamatics, IIT Kanpur

- Analyzed, implemented, and practiced algorithms like (efficient) prime factorization, calculating factorials of large numbers, and **polynomial hashing** in C++

Data Structures and Abstract Data Types *Jan '20 – Jul '20*
Association of Computing Activities, IIT Kanpur

- Solved **200+** programming questions by applying data structures like sets, maps, stacks, queues, from the **C++ STL**
- Participated in **50+** programming contests and improved Codeforces rating by **~500**

Virtual Experience

Crio Winter of Doing *Jan '21 – Feb '21*
Externship program for developers | Crio.Do *CWoD*

- Learned and implemented introductory concepts of **HTTP, REST API, AWS, Linux, Git, HTML, CSS, JavaScript**
- **Launched an instance of Amazon EC2**, deployed the backend server of the QEats (dummy) android app, and connected the app to its backend server
- Sorted cities based on the popularity of the QEats android app by **analyzing 10k+ logs** using **Linux shell techniques**
- Deployed the frontend and the backend of my **Personal Portfolio** web application; **Fetched my repository descriptions in real-time** by **integrating** this application with my **GitHub** account
- Among the **final 1200 out of 10,000+** total applicants to clear the coding round and reach **Stage-2B**

Technical Skills

Programming Languages: C, C++, Python, Go, MATLAB, HTML5, CSS3, JavaScript, PHP
Technologies/Frameworks: Node.js, Express, MySQL, SQLite, Linux shell utilities, Git, LaTeX, Qiskit, AutoCAD

Achievements & Honours

Programming Achievements

- **Globally ranked 1055** in **Google Kick Start** Round D 2021 *Jul '21*
- **Globally ranked 976** in **Google Kick Start** Round H 2020 *Nov '20*
- **Globally ranked 2769** out of 13820 contestants in Round 1 of **Facebook Hacker Cup** 2020 *Aug '20*

Scholastic Achievements

- Secured **All India Rank 3592** in **JEE-Advanced** out of 220,000+ shortlisted candidates *2019*
- Achieved **All India Rank 7480** in **JEE-Main** out of 0.9 million+ candidates *2019*
- Among **National Top 300** to be selected for **Indian National Chemistry Olympiad**, HBCSE *2018-19*
- Secured **All India Rank 322** in **KVPY** out of 50,000+ candidates and selected for **KVPY Fellowship** by Govt. of India, and IISc Bangalore, one of the most prestigious science scholarships in India *2017*

Miscellaneous

- Actively participate in **Competitive Programming** contests [max. rating 1468 on Codeforces] *CF-profile*
- Implemented **Grover Search** algorithm by designing **Quantum Circuits** using **Qiskit** library in Python *GitHub*
- Secured an **A*** with **99.5%** marks in the course - Manufacturing Processes II for **good teamwork and creativity**
- Served as an **NCC cadet** at IIT Kanpur for a year

Relevant Coursework

Fundamentals of Computing
Signals, Systems & Networks
Probability and Statistics
Control Systems
Intro to Machine Learning[i]
Partial Differential Equations

A: grade for exceptional performance, [i]: online certified, [hyperlinked at appropriate places]*