

# Saundarya Keshari

Roll No. 220102122 B.Tech - Electronics and Communication Engineering Minor in Computer Science and Engineering

Indian Institute Of Technology, Guwahati

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### EDUCATION

Degree/Certificate	${\bf Institute/Board}$	CGPA/Percentage	Year
B.Tech. Major	Indian Institute of Technology, Guwahati	8.65 (Current)	2022-Present
B.Tech. Minor	Indian Institute of Technology, Guwahati	9.00 (Current)	2023-Present
Senior Secondary	ISC Board	99.25%	2021
Secondary	ICSE Board	92.8%	2019

### Projects

• Airline Passenger Recovery Optimization

Nov. 2023 - Dec. 2023

Gold Medal, Inter IIT Tech Meet 12.0, IIT Madras | Judges Choice Award, Techevince 10.0

t.ly/airline

- Solved the famous Passenger Recovery Problem by implementing a classical solution with gurobipy and a quantum approach utilizing a Constrained Quadratic Model (CQM), effectively reallocating passengers affected by flight disruptions.
- Employed a range of methods including **Flight-graph creation**, **DFS** integrated with **Dynamic Programming** for efficient pre-processing, and applied multi-threading in conjunction with Flow Network Algorithms for effective post-processing.
- Developed a **Streamlit-based GUI** to display results and allow airlines to modify business rules for passenger reallocation.
- LLM Powered Career Counsellor and Interviewer Bot

May 2024 - Jun. 2024

Google Cloud Vertex AI Agent Builder Hackathon

Live Website | t.ly/sforge

- Utilized Google Vertex AI Agent Builder and OpenAPI to create personalized agents with Cloud functions, designing tailored skill development roadmaps and automated course recommendations based on career goals and expertise.
- Designed a mock interview app using RAG and integrated Codeforces API with BeautifulSoup for coding assessment.
- Added support for document uploads for CV reviews, and deployed the platform on Google Cloud Run using Docker.

• Dark Web Scraper

Mar. 2024 - May 2024

Coding Club IITG, featured in Techevince 10.0

t.ly/dws

- Created a python-based scraper to securely extract data from dark web forums via the Tor network using BeautifulSoup.
- Implemented strategies to successfully evade but detection mechanisms, including multithreading and randomized login.
- Constructed a CLI that allows for data querying by usernames, keywords etc. from 2,000+ threads to facilitate analysis.

• DBMS with C

May 2024 - Ongoing

Personal Project t.ly/cdbms- Developed a database management system in C language, aiming to replicate the functionality of full-fledged DBMS.

- Leveraged **B+ trees** for efficient data structure management, supporting operations such as **insertion** and **selection**.

- Inter IIT Tech Meet 12.0: Won the Gold Medal among 100+ students from 20 IITs in the Quantum Computing Challenge.
- Branch Upgrade: Earned a merit-based branch upgrade to ECE from CL by ranking in the top 10 percent.
- Codeforces: Attained a maximum rating of 1611 (Expert) on Codeforces with 400+ problems solved. (handle: jazzsterq)
  - Secured India Rank 175 and Global Rank 540 among 16,700+ participants in Codeforces Round 950.

• CodeChef: Attained a maximum rating of 1959 (4 Stars) on the coding platform CodeChef.

- (handle: jazzsterg)
- Secured Global Rank 168 in Starters 139 and Global Rank 63 in Starters 112 among 18,900+ participants.
- AtCoder: Attained a maximum rating of 1068 (5 Kyu) on the coding platform AtCoder.

- Secured India Rank 59 and Global Rank 1147 among 10,700+ participants in AtCoder Beginner Contest 359.
- Meta Hacker Cup: Advanced through round 0 and 1 and achieved a rank of 3519 in round 2 of the Meta Hacker Cup.
- Reply Challenges 2024: Ranked Global 59 among 700+ teams in reply Challenge 2024 programming contest.
- Kimo.ai Tech Quiz: Secured Rank 3 among the students of IIT Guwahati in KIMO's-Edge '23 Tech Quiz Competition.
- Csaw.io: Earned India Rank 11 and Global Rank 84 amongst 10,000+ participants in CSAW'23 Capture the Flag event.
- Inter-IIT Bootcamp: Achieved 3rd position in the Healthcare-Software PS hackathon organized in IIT Guwahati.
- Joint Entrance Exam Main 2022: Placed in the top 1.1 percentile among 0.90 million candidates appearing for the test.
- Joint Entrance Exam Advanced 2022: Secured All India Rank 8907 among 0.15 million candidates appearing for the test.

### TECHNICAL SKILLS

- Programming: C, C++, Python\*, Java\*
- Development: HTML, CSS, Streamlit
- Python Libraries: Streamlit, Beautiful Soup, Gurobipy\*
- Operating System: macOS, Windows, Linux\*
- Miscellaneous: LATEX, Markdown, Git, Github

\* Elementary proficiency

### KEY COURSES TAKEN

- Computer Science: Data Structures & Algorithms, Introduction to Computing & Lab\*, Automata Theory, Digital Circuits
- Mathematics: Probability Theory and Random Processes

\* AS(Outstanding) Grade

## Positions of Responsibility and Extracurriculars

- Core Team, Coding Club IITG: Fostered a coding culture in college, leading various workshops with 200+ participants.
- JAM Head, Debating Society IITG: Organized Inter-Hostel JAM tournament & participated in Inter IIT Cultural Meet 6.0.
- Manager, Udgam IITG: Coordinated national hackathons & fostered an entrepreneurial mindset among 5,000+ college peers.
- Table Tennis: Represented Mirzapur district in UP State Level Championship & achieved a Gold Medal in TT League 7.0.