



Arti Sahu

Roll No.: 200123011

B.Tech - Mathematics and Computing

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EDUCATION

Degree/Certificate	Institute/Board	CGPA/Percentage	Year
B.Tech.	Indian Institute of Technology, Guwahati	6.44 (Current)	2020-Present
Senior Secondary	CBSE Board	93.2%	2019
Secondary	CBSE Board	10 CGPA	2017

PROJECTS

- **Detecting Turing patterns in a prey-predator system with spatially varying diffusivity** *Aug 2023 - Ongoing*
B.Tech. Project under Asst. Prof. Satyajit Pramanik, Mathematics Department, IIT Guwahati
– Researched **spatio-temporal models** for **pattern formation**, detecting **Turing patterns** using **Python/C++**
– Analyzed **ODE/PDE systems**, studying stability in pattern formation, investigating species dynamics
– Explored mathematical biology in pattern emergence, predator-prey interactions, and ecosystem self-organization
- **Face Recognition-Tracking attendance** *Apr 2022 - May 2022*
Microsoft Engage Mentorship Program 2022
GitHub Repository
– Developed an app using **OpenCV** demonstrating **Face Recognition**. Records student **attendance** in a **CSV** file
– Offering functions like face detection, face verification, age detection, gender detection, landmark analysis
– It performs operations like Face makeup, Video face detection, Video face alignment, Real-time age-gender detection
- **Code Zone** *May 2023 - Aug 2023*
Personal project
GitHub Repository
– Developed a **Full-stack** app utilizing **React** frontend and **Firebase** backend, showcasing a sleek **Material UI** design
– Implemented authentication methods including **Email/Password**, **Google**, and **GitHub** with features for **Email verification** and **Password resetting**. Added an **Online Compiler** with Input/output using external **Compiler API**
– Established a platform for task management and organizing coding resources for developers
- **Code Contribute** *Jan 2023 - Apr 2023*
Personal project
Github Repository
– Created a comprehensive **full-stack** app with **ReactJS** frontend and **MongoDB**, **ExpressJS** and **NodeJS** backend
– Have **authentication** and an elegant **user interface**. Enable knowledge exchange by facilitating code-sharing
- **NASA Project** *Oct 2022 - Dec 2022*
Personal project
GitHub Repository
– Crafted a **ReactJS** app interfacing with a **NASA-powered API** featuring an elegant design using **styled-components**
– Enables users to engage with NASA's Daily Picture, **Mars weather** and explore curated **rover-taken images**
– Provides Picture of any Day and a compilation of videos, audio, and blogs from the extensive NASA Library

TECHNICAL SKILLS

- **Programming:** C, C++, Python, Java
- **Web Technologies:** HTML, CSS, JavaScript, NodeJS, ExpressJS, Git/GitHub, ReactJS, OpenCV
- **Database management:** Google-Firebase, MongoDB, MySQL

KEY COURSES TAKEN

- Data Structure and algorithms (Theory + Lab)
- Database Management System (Theory + Lab)
- Computer Networks (Theory + Lab)
- Operating Systems (Theory + Lab)
- Financial Engineering (Theory + Lab)
- Statistical Inference and Multivariate Analysis
- Probability Theory and Random Processes
- Scientific Computing

ACHIEVEMENTS

- **JEE 2020:** Secured **All India Rank 8634** among 0.25 million candidates in **JEE Advanced** and stood at **95.25 percentile** among 1.1 million candidates in **JEE Mains** showcasing my competitive performance.
- **Joint Dakshana Selection Test(JDST) 2019-20:** Selected from India's **top 1%** gained a coveted chance for **one-year free JEE-Advance prep** reflecting my dedication.

POSITIONS OF RESPONSIBILITY

- **Alcheringa (Annual Cultural Fest, IIT Guwahati):** Core Team Member of **Marketing Team** *Apr 2022 - Apr 2023*

EXTRA CURRICULARS

- **Matrix Content Writing:** The student body of IIT Guwahati mathematics department consistently crafts captivating monthly blogs. These insightful posts delve into fascinating **mathematical facts** intertwined with the human experience.
- **FFE mentorship program:** Successfully completed 6-month mentorship program facilitated by **FFE** organization. Acquired valuable insights into **time management**, **problem-solving skills**, and **interview etiquette**.
- **Finding the Leadership in You (FLY) Program(2021):** Completed the 12-day **FLY Program** focusing on cultivating essential non-cognitive skills like **conscientiousness**, **innovativeness**, **initiative**, **perseverance**, and **problem-solving**.
- **Hello English:** Completed a 6-month English speaking course organized by **FFE Organisation**.