

Tuhina Chakravarti

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Portfolio: <https://tuhina.github.io/> | **GitHub:** <https://github.com/ttuhina> | **LinkedIn:** <https://www.linkedin.com/in/tuhina-chakravarti-7703562aa/>

Professional Summary

Computer Science student specializing in IoT and Intelligent Systems, with experience in full-stack development using the MERN stack, and IoT solutions. Proficient in developing scalable applications using Node.js, Python, and MySQL with ability to develop customer-centric applications.

Educational Qualifications

B.Tech in Computer Science and Engineering (Honours in IoT & IS) | Manipal University Jaipur | Expected 2026

- CGPA: 8.07/10 | Highest GPA: 9.73
- **Relevant Coursework:** Data Structures and Algorithms, Machine Learning, IoT Systems, Object Oriented Programming, Software Development Life Cycles, Software Testing Strategies, RDBMS, Operating Systems, Computer Networks.

Higher Secondary (XII) | Telangana State Board | 2022

- **Percentage:** 90.4%

Secondary (X) | Army Public School, Sukna (CBSE) | 2020

- **Percentage:** 93.2%

Skills

- **Programming Languages:** Python (NumPy, Pandas, Matplotlib, Seaborn, Scikit-Learn, OpenCV), Java, C
- **Web Technologies:** Node.js, Express.js, React.js, HTML5, CSS3, JavaScript (ES6+)
- **Databases:** MongoDB, MySQL
- **Development Tools:** Git, GitHub, VS Code, Microsoft Azure
- **IoT & Hardware:** Arduino Uno, Raspberry Pi, RFID Technology
- **Frameworks:** Microsoft Bot Framework, REST APIs

Professional Experience

Node.js Intern | Celebal Technologies | June 2024 - August 2024

- Engineered an intelligent chatbot system using Microsoft Bot Framework and Node.js, implementing advanced conversation flows.
- Built robust backend infrastructure using Express.js and MySQL, creating RESTful APIs for seamless data handling of 1,000+ user interactions daily.
- Developed full-stack features using MERN stack, including user authentication, real-time updates, and database integration.

Full-Stack Web Developer Intern | Syn Steel and Bearings Co. | July 2024 - August 2024

- Architected and launched company's official website (<https://synsteel.in/>) using HTML, CSS, and JavaScript.
- Implemented responsive design, ensuring compatibility across 95% of devices.

Academic & Personal Projects

PotBot – Restaurant Management Chatbot | <https://github.com/ttuhina/PotBot>

- Developed a chatbot using **Node.js** and **Express.js** for restaurant discovery, menu browsing, order placement, and reservations.
- Designed **RESTful APIs** and a **MySQL** database for restaurant search, menu management, and order handling.
- Created a responsive web interface with **HTML**, **CSS** and **JavaScript** for seamless user interaction.

JSON Web Token Authentication Visualizer | <https://github.com/ttuhina/JSON-web-token-authentication-visualiser>

- Built an interactive web app demonstrating **JWT authentication** with a 3D digital access card visualization.
- Developed **RESTful APIs** using **Node.js** and **Express.js** for secure user authentication and token management.

Smart Shopping Cart – IoT-Based Retail Solution

- Engineered an automated shopping cart with **Arduino Uno** and **RFID** for real-time product tracking and inventory management.
- Integrated an **RFID reader** for accurate product identification and tracking.
- Designed a digital interface to display totals and product details in real time.

Kinship Verification System – Machine Learning Project

- Developed a facial recognition system using **Python** and **OpenCV** to verify familial relationships.
- Implemented feature extraction techniques (**HASC**, **LBP**, **SIFT**) for robust analysis and accuracy.
- Built a **Gradient Boosting pipeline** with **scikit-learn**, achieving high accuracy on the KinFaceW-II dataset.

Leadership & Responsibilities

Joint Head of Content | ENACTUS Chapter, MUJ | July 2023-April 2024

- Contributed to the development of DHI mobile application, which serves to empower rural communities by providing access to information about government schemes, women's menstrual health resources, and educational opportunities for the underprivileged.
- **Created content** for a platform aimed at bridging the information gap in underserved areas.

Core Committee for Major Events | Oneiros'24, MUJ | January 2024-February 2024

- Directed the organization of all major events during Oneiros'24, Rajasthan's biggest techno-cultural festival. Oversaw **planning**, **coordination**, and **execution** of events with unparalleled footfall, ensuring seamless operations and unforgettable experiences for attendees, collaborating with and managing a team of 200+ students.

External Fest Co-ordinator – TMC, MUJ | Jan 2024-Apr 2024

- Facilitated **management** of external festivals and coordinated nationwide event participation for our club. Served as a **liaison** for sharing information and managing communication.

Achievements

Top 20 teams | Techno-Entrepreneurial Bootcamp and Ideathon, MUJ | August 2024

- Ranked among top 20 teams in over 200+ teams.
- Our journey involved crafting CoursePilot, a web-based educational solution for convenient E-learning.

Elite rank in Data structures and algorithms examination, NPTEL | October 2024

- Scored a percentage of 61%, putting me in the elite category.