Tuhina Chakravarti

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

Professional Summary

Enthusiastic and detail-oriented Computer Science undergraduate with hands-on experience in full-stack development, deep learning, and IoT solutions. Proven track record of delivering impactful projects, including chatbot systems, authentication tools, and a high-accuracy deep learning models.

Educational Qualifications

B.Tech in Computer Science and Engineering (Honours in IoT & IS) | Manipal University Jaipur | Expected 2026
- **CGPA:** 8.39/10 | **Highest GPA:** 9.73/10
- **Relevant Coursework:** Data Structures and Algorithms, Machine Learning, Cryptography & Network Security, 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:** React.js, HTML5, CSS3, JavaScript (ES6+)
- **Scripting & Development:** Python, Shell Scripting, Node.js, Express.js
- **Databases:** MongoDB, MySQL
- **Development Tools:** Git, GitHub
- **IoT & Hardware:** Arduino Uno, Raspberry Pi, RFID Technology
- **Frameworks:** Microsoft Bot Framework, REST APIs

Professional Experience

Node.js Intern | Celebal Technologies | June 2025 - August 2025
- Currently developing a full-stack appointment scheduling system using Node.js, Express, MySQL, and JWT authentication, enabling secure user sign-up/login, CRUD-based appointment management, and real-time slot availability checking with calendar integration.

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.
- - Enhanced my proficiency in full-stack development using the **MERN** stack.

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
- This project implements a secure authentication system using JSON Web Tokens with a RESTful API backend and an interactive frontend.
- It visualizes the JWT as a 3D digital access card, providing a unique and engaging way to understand token-based authentication.
- Uses **Node.js** and **Express.js** for backend and **HTML, CSS** and **JavaScript** for frontend.

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 using Transformer Models – Deep Learning Project
- Designed and implemented a kinship verification system using the Swin (Shifted Window) Transformer architecture, evaluated on the KinFaceW-II dataset. The model achieved an accuracy of 96.33%, the highest performance reported on this dataset in the past five years.

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.

Achievements & Certifications

Top 20 teams, Techno-Entrepreneural Bootcamp and Ideathon, MUJ | August 2024
- Ranked among top 20 teams in over 200+ teams.

Elite rank in Data structures and algorithms examination, NPTEL | October 2024
- Achieved an elite ranking, demonstrating strong problem-solving skills in algorithms and data structures.

Dean's list for Academic Excellence, MUJ | May 2025
- Felicitated by the Dean of Engineering for achieving the highest Grade Point Average in Semester V and VI.