

Tushar Ranjan

tr822@drexel.edu | [LinkedIn](#) | [Portfolio](#) | Philadelphia, PA

EDUCATION

Master of Science, Computer Science, Drexel University, Philadelphia, PA | **CGPA: 3.85/4**

Sep 2023- June 2025

- Relevant coursework: Artificial Intelligence, Computer Vision, Data Structures and Algorithms, Developing user Interface, Computer Networks, Software Project Management

Bachelor of Engineering, Information Science, DSCE, Bengaluru, India | **CGPA: 8.67 /10**

Aug 2019 – Jun 2023

- Relevant coursework: Data Science & Analytics, Software Engineering, Cloud Computing

WORK EXPERIENCE

FULL STACK DEVELOPER INTERN | HYPHENOVA NETWORK | North Hollywood, CA (Remote)

Sep 2024- Present

- Developed** backend endpoints using Python and FastAPI, **improving** API response times by 30%, and created models and schemas for database integration, **enhancing** data accuracy by 20%.
- Contributed** to frontend development in React Native, improving app load times by 15%, while **streamlining** UI/UX design with Figma to **reduce** development time by 10%.
- Tech Stack**: FastAPI, Python, React Native, Postman, AWS, Git/GitHub, Figma, PostgreSQL

WEB DEVELOPMENT INTERN | BUSINESS WEB SOLUTIONS | Bengaluru, India

Mar 2023-May 2023

- Enhanced** UIs using HTML5, CSS3, and JavaScript ES6, increasing user engagement by 30%, and **optimized** backend with Python and Django, improving server response times by 25%.
- Developed** 10+ reusable React.js components, **boosting** site traffic by 20%, and **streamlined** Git/GitHub workflows, reducing merge conflicts by 40%.
- Tech Stack**: HTML5, CSS3, JavaScript ES6, React.js, Python, Django, SQL, PostgreSQL, Git/GitHub

SWE INTERN | M-KUBE | Sydney, Australia (Remote)

Mar 2022-June 2022

- Engineered** a front-end revamp, **designed** responsive interfaces and **integrated** new features, resulting in a **35% increase** in user engagement.
- Optimized** project workflows and **standardized** coding practices, achieving a **40% increase** in project delivery efficiency by ensuring seamless cross-device compatibility and back-end integration.
- Tech stack**: HTML5, CSS3, JavaScript ES6, React.js, JSON, AJAX, Git/GitHub

PROJECTS

AgentPals: Transforming Real Estate with AI-Driven Insights ([Link](#))

- Conceptualized and developed AgentPals**, an innovative AI-powered platform that revolutionizes real estate transactions by automating and analyzing disclosure forms, drastically reducing manual errors and saving time for agents.
- Engineered the entire backend infrastructure from the ground up using **FastAPI**, **Cohere**, **Qdrant**, **Supabase**, and **LangChain**, and designed a responsive frontend with **React**.
- AWS-deployed** application using **NGINX** for server management and **tmux** for session stability.
- Introduced a state-of-the-art **Retrieval-Augmented Generation (RAG) chat feature**, allowing users to interact intuitively with all documents related to a property, enabling smarter decision-making and enhanced client communication.
- Empowered real estate agents** with advanced AI tools to manage property disclosures effortlessly, increasing their operational efficiency and ensuring compliance with regulations.
- Tech Stack**: Python, FastAPI, Cohere, Qdrant, Supabase, LangChain, React.js, AWS, NGINX, tmux

Zest – Real-time chat application ([Link](#))

- Developed** a secure, real-time chat application using the MERN stack, Socket.IO, and JWT, **facilitating** instant messaging, seamless user interactions, and secure access control, while enhancing performance and scalability through optimized websocket management.
- Implemented** state management with Zustand and **optimized** real-time responsiveness using efficient websocket techniques.
- Designed** robust error handling for both server and client sides to ensure a smooth user experience and enhance application reliability.
- Tech Stack**: MongoDB, Express.js, React.js, Node.js (MERN), Socket.IO, TailwindCSS, Daisy UI, Zustand

SKILLS

Programming Languages: Python | HTML | CSS | Javascript | Java | SQL

Libraries/Frameworks: React.js | Django | NumPy | Pandas | Flask | Node.js | Langchain | Llama3 | Cohere | Qdrant | FastAPI

Tools/Platforms: Git and Github | MATLAB | Figma | Linux | AWS | Oracle Cloud Infrastructure | tmux | nginx | Supabase

Databases: MySQL | MongoDB | PostgreSQL

Technologies: Large Language Models(LLM) | Retrieval-Augmented Generation(RAG)

CERTIFICATIONS

- Oracle Cloud Infrastructure 2024 Generative AI Certified Professional** | Oracle ([Link](#))
- Java Programming Masterclass updated to Java 17** | Udemy ([Link](#))
- HTML, CSS, and Javascript for Web Developers** | Coursera ([Link](#))