

TARUN RANA

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<https://tarun-rana-portfolio.vercel.app/>

EDUCATION

Master's in Science, Computer Science

The University of Texas at Arlington, US

Aug 2021 – May 2023

GPA: 3.75

Bachelor's in Engineering, Computer Engineering

The University of Mumbai, IN

Aug 2014 – May 2018

GPA: 3.50

SKILLS

Programming: JavaScript, TypeScript, Python, R, PHP, C++, and C#.

Frameworks, and tools: React.js, Next.js, Flask, Node.js, Express.js, .NET Core, Mongoose, Laravel, Git, GitHub, AWS, Azure, Vercel, Postman, Bash, NumPy, Pandas, TensorFlow, Google Colab, Azure data studio.

Web and Database: Bootstrap, HTML5, CSS3, SASS, Styled Components, Tailwind CSS, MongoDB, PhpMyAdmin, XAMPP, Postgres SQL, Microsoft SQL server, Flexbox, Grid, UI/UX development, Framer Motion.

EXPERIENCE

Full Stack Developer, UT Arlington

Sep 2023 – present

Project: UTA Neighborhood (Link: <https://www.utaneigh.xyz/login>)

(TypeScript, React.js, Styled Components, React-query, React-router, Node.js (express.js), Web Sockets, AWS (EC2, S3, Elastic IP, IAM roles), Nginx, Git, MongoDB, Mongoose, Bash, Postman)

- Successfully resolved campus real-world challenges by developing a web application for buying and selling household items among students and faculty members.
- Utilized TypeScript and React.js for front-end development, integrating React-query for fetching data and react-router for routing, alongside third-party libraries like react-icons and Axios.
- Implemented real-time chat functionality via socket.io and secured a RESTful API with TypeScript, Node.js, and Express.js, incorporating JWT and bcrypt for authentication and authorization.
- Employed MongoDB with Mongoose for data storage, managed images using Multer and Sharp, and conducted comprehensive testing with Postman.
- Deployed the application on AWS EC2 (Ubuntu 20.04), with images stored in AWS S3, and configured nginx as a reverse proxy for seamless deployment and scalability, successfully serving the university community's needs.

Full Stack Developer, Mindise Pvt Ltd

Apr 2020 – May 2021

Notable Projects: Kings United & Aditi Tracking (HTML5, SASS, JavaScript, Node.js, MongoDB, Git)

- Collaborated with clients to gather requirements for the product with a team of six and created wireframes and prototypes, which resulted in refining user interface behaviors, and decreased front-end development time by 35%.
- Developed and executed an intuitive and user-friendly interface, utilizing a technology stack that included React, React-Router, and Redux Toolkit (efficient global state management).
- Implemented Unit, Integrated, and end-to-end testing with Jest and Cypress, for the developed components which led to a decrease in bug detection by 40% and an improvement in code quality.
- Designed a secure authentication system utilizing Node.js(express) API, cookies, and JWT package, reducing login errors by 60%.
- Constructed a scalable backend architecture consuming MongoDB and Mongoose as ODM, by fine-tuning database queries that boosted server response time by 75%, enabling the seamless handling of up to 1000 requests per second.
- Significantly contributed to developing and documenting Restful APIs by leveraging Postman for automated testing and managed environment variables for both the development and production phases.

PROJECTS

DL-Reader (Link: <https://dl-reader.vercel.app/>)

(TypeScript, React, Tailwind CSS, tesseract.js, Zustand, vite)

Implemented a driver's license scanning system utilizing Optical Character Recognition (tesseract.js OCR) technology to extract essential information such as first name, last name, issue date, expiration date, and address using regex.

QueryMeter (Azure Cloud services, SQL, Database, Caching)

Developed a Flask web application to efficiently handle various datasets, deployed on Microsoft Azure with Azure Virtual Machines and Azure SQL services for scalability and reliability. Optimized query fetching with Redis caching by 68%, enhancing overall performance.

Multi-layer Neural Network (Python, NumPy, TensorFlow, Google Colab)

Engineered a high-accuracy neural network with TensorFlow and NumPy for MNIST image classification, achieving 98.73% accuracy. Enhanced performance by 5% on average by integrating Convolutional and Recurrent Neural Networks for image classification tasks.

Portfolio (Next.js, Tailwind CSS, Git, Vercel)

Created an eye-catching personal portfolio website with TypeScript, Next.js, Framer Motion, Context API, and Tailwind CSS, increasing user engagement by 40% and mobile traffic by 50%, deployed on Vercel with Git for Continuous Deployment

E-Commerce (C#, ASP.NET Core, HTML, CSS, JavaScript, Microsoft SQL Server)

Developed a dynamic e-commerce web app, integrating user registration, shopping cart, and order tracking, with optimized code structure using Factory Method and Repository Pattern. Rigorously tested functionality with NUnit and Selenium, ensuring optimal user experience, scalability, and maintainability through C# and .NET technologies.