TARUN RANA

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EDUCATION

Master's in Science, *Computer Science*   *Aug 2021 – May 2023*
The University of Texas at Arlington, US   *GPA: 3.75*
Bachelor's in Engineering, *Computer Engineering*   *Aug 2014 – May 2018*
The University of Mumbai, IN   *GPA: 3.50*

SKILLS

Programming: JavaScript, TypeScript, Python, R, PHP, C++, and C#.
Frameworks, and tools: React.js, Nextjs, Prisma, Flask (Jinja), Node.js (Express), .NET Core, Mongoose, Laravel, Git, GitHub, AWS, Azure, Vercel, Netlify, Thunder Client, Postman, Swagger, Linux, Bash, NumPy, Pandas, TensorFlow, Keras, Google Colab, Jupyter Notebook, VS Code, Visual Studio 2022, and 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 development, UI tuning, Framer Motion.

EXPERIENCE

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, implementing caching, code optimization, asynchronous processing, and 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 the development and documentation of Restful APIs by leveraging Postman for automated testing and managed environment variables for both the development and production phases.

University of Texas at Arlington   *Aug 2021 – May 2023*
Multi-layer Neural Network *(Python, NumPy, TensorFlow, Google Colab)*
- Engineered a multi-layer neural network with TensorFlow and NumPy libraries in Python for image classification from the MNIST dataset, utilizing optimized inputted activation and loss functions to achieve 98.73% accuracy.
- Integrated Convolutional Neural Networks and Recurrent Neural Networks in image classification tasks; amplified accuracy by 5% on average.
CollegePlace *(SCSS, React.js, Laravel, Eloquent(ORM), MySQL, WordPress, RESTful API, UTA Cloud)*
- Managed a team of 5 developers to plan and execute the development of a client-side rendered website called CollegePlace where student can create their own clubs, and blogs and can have real-time chat.
- Using React.js and context API best practices to develop a website, the rendering was done using SCSS which helped increase user engagement by 45%.
- Developed RESTful API using Laravel framework, employing Eloquent as ORM and seamlessly integrating phpMyAdmin for streamlined data management and storage.

PROJECTS

QueryMeter *(Azure Cloud services, SQL, Database, Caching)*
- Developed a comprehensive web application using Flask to efficiently handle and fetch data from various datasets, resulting in a 50% reduction in data processing time.
- Deployed the full-stack web app on Microsoft Azure utilizing Azure SQL database services, improving the application's scalability and reliability by 40%.
- Optimized the web app's query fetching using Redis caching optimization, making it highly effective in managing diverse datasets and improving efficiency by 68%.
E-Commerce *(C#, ASP.NET Core, HTML, CSS, JavaScript, Microsoft SQL Server)*
- Created a dynamic e-commerce web app in C# and ASP.NET with user registration, shopping cart, and real-time order tracking, optimizing code structure using Factory Method and Repository Pattern.
- Ensured optimal functionality and user experience through rigorous testing procedures, including NUnit unit testing and Selenium end-to-end testing.
- Utilized C# and .NET technologies to create a scalable and maintainable codebase, enhancing application performance and enabling future development potential.
Portfolio *(Typescript, Tailwind CSS, Next.js, Git, Vercel)*
- Developed a visually stunning personal portfolio website using TypeScript, Next.js, Framer Motion, Context API, and Tailwind CSS, boosting user engagement by 40%.
- Implemented media queries to create a responsive design across all devices, resulting in a 50% increase in mobile users.
- Website has been deployed on Vercel using Continuous Deployment (CD) with Git as the version control system.