TIANXIANG REN
Software Engineer

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GitHub | LinkedIn | Portfolio

EDUCATION

Northeastern University
Master of Science in Information Systems, GPA: 3.6

Boston, MA
Expected Dec 2023

Graduate Teaching Assistant for course INFO6205-Program Structure and Algorithms(Python)

Relevant Courses: Concepts of Object-Oriented Design, Web Design and User Experience Engineering, Program Structure and Algorithms, Advanced Data Science and Architecture, Smart Contract Automation

Hefei University of Technology
Bachelor of Engineering in Mechanical Engineering

Hefei, China
Sep 2017 - Jun 2021

WORK EXPERIENCE

Software Development Intern
TRACT

Mar - Jun 2023
San Francisco,CA

- Developed the website of TRACT with **TypeScript, React** and **Material UI,** optimized the website's frontend codebase and improved website load times by 25% through optimizing image loading and implementing lazy loading techniques
- Collaborated with the backend team to design robust user authentication and authorization mechanisms, integrated **OAuth2** and **JWT** for secure user login and access, implemented role-based access control (RBAC) to enforce permissions, observed an impressive 40% reduction in unauthorized access attempts
- Leveraged React components, managed state using Redux, and utilized Axios for API calls. Employed CSS modules for styling to ensure modularity and avoid conflicts
- Worked alongside designers and other teams to translate design updates into functional UI components. Collaborated on UI/UX discussions, contributing insights on design feasibility and user interactions.
- Conducted unit and integration testing using **Jest** and React Testing Library to ensure accurate functionality
- Utilized **AWS EC2** instances to host the website and **Nginx** as a reverse proxy server, ensuring seamless deployment and accessibility

Software Engineer Intern
Sichuan TIANYUAN Machinery Engineering Co., ltd.

Jun 2019 - Aug 2019
Guangyuan, China

- Developed an internal management application aimed at streamlining company processes and data management using **Python** and **Flask**
- Designed a user registration, login, and permission management system, implementing password hashing using Flask-Login and **Werkzeug**, improved data security and privacy protection
- Implemented robust CRUD operations and established seamless connections to **MySQL** databases, resulting in efficient handling of data management and 30% reduction in processing time

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FULL-STACK PROJECTS

live | github

MovieProx | *Javascript, React, Node.js, MongoDB Altas, Axios* **|** Movie website inspired by Netflix

- Built a responsive Nextflix-like website built with MERN (**MongoDB**, **Express**, **React**, **Node.js**) stack and the Themoviedb API. Users can sign up, search movies, TVs and people, add movies to favorite list, write reviews.
- Developed server APIs with Express and make API calls to the Themoviedb API by deploying **Axios** clients
- Designed responsive and modern web pages with React, Material UI, SwiperJS, Formik and Yup
- Provided user authentication and protection with **JWT** and Express Validator
- Deployed the application on **Vercel** and host the database on MongoDB Atlas for cloud storage

Trollo | *Java, Node.js, React, Redux, Spring Boot, MySQL* **|** Trello alike Project Management Tool Application

- Built a Trello alike application that utilizes Kanban boards (which represent projects), cards (which represent tasks), and lists (which tracks the statuses of different projects) to move tasks or organize the resource materials in real-time.
- Developed backend REST APIs with **Spring Boot 2.0** for CRUD operations on **MySQL**, secured by Spring Security and JWT. Built a web frontend with **React** and **Bootstrap** and used **Redux** to manage the state of the application. Deployed the application into Heroku's free tier.

TECHNICAL SKILLS

Programming Languages: TypeScript, JavaScript, Java, Python, HTML / CSS
Frameworks & Tools: React, Node.js, SpringBoot, Flask, Django, Docker, Git
Databases: SQLite, Sequelize, SQLAlchemy, Postgres, MySQL, MongoDB