KENT (KHANG) TRAN

Mechatronics Engineering, University of Waterloo

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SUMMARY OF QUALIFICATIONS

- Technical Skills: Python, Java, C++, JavaScript, TypeScript, HTML, CSS, Rest APIs, GraphQL APIs
- Frameworks: Flask, SQLAlchemy, Django, Django REST Framework, Spring Boot, Spring MVC, React.js, Express.js, Java Swing
- Databases: MySQL, PostgreSQL, MongoDB, Oracle DB, H2, JPA
- Tools: Git, Docker, Kubernetes, Postman, AWS, Twilio, Google Cloud Platform, Maven/Gradle, Ngrok, Apache and Nginx

PROJECTS/EXPERIENCE

BT1XX Control Software Program | OpenCV, Flask, HTML, CSS, JavaScript, MongoDB, MySQL

Software Developer | Martinrea Hydroform Solution | January 2023 - April 2023

- Developed user-friendly full-stack web application using HTML, CSS, and JavaScript, leveraging Flask routes to trigger Python functions in the computer vision program, resulting in a 50% reduction in camera configuration and mask processing time, and a 20% increase in productivity.
- Ensured security of user data with API security practices and MongoDB, and maintained 90% uptime and zero data loss using MySQL to store station camera settings and timestamps.
- Improved user satisfaction by 25% by creating an intuitive front-end user interface with Werkzeug and Jinja2 templates, garnering positive feedback from users and stakeholders.
- Enabled seamless communication between the JavaScript client and Python server via Fetch and REST APIs, delivering smooth and reliable event handling between the website and the computer vision program.

Waterloo Rocketry Design Team

Software Developer | July, 2022 - Present

- Used object oriented design to develop Python software to simulate operation procedure and reducing testing times by 30%
- Used git for version control and collaboration
- Wrote unit tests for rocket procedures
- JavaScript, Node.js, React and Bootstrap are used for webpage designing.

StudyHub | Flask, TypeScript, React.js + Vite, AWS, Twilio, GCP, PostgreSQL

Software Developer | January 2023 - Present

- Designed and developed CRUD REST APIs using Flask, SQLAlchemy, and PostgreSQL for user registration, login, and profile creation with study preferences and availability schedules.
- Secured the APIs with JWT tokens and bcrypt hashing for sensitive data protection.
- Utilized AWS DynamoDB, Lambda, and SES, along with Twilio SendGrid to implement email verification functionality for users and GCP Geolocation API to verify user addresses.
- Created routes for Google OAuth 2.0 to allow users to sign in with their Google accounts and built a Docker container for both the database and server components for easy deployment and maintenance.
- Developed unit tests for REST APIs and implemented a neural network-based matching algorithm to monitor user input and suggest the best study groups for users to join.

ToDoozy | Java Spring MVC, Java Swing,

Software Developer | March 2023 - Present

- Developed Java Spring MVC REST APIs with JPA Hibernate and an H2 in-memory database for a To-Do list desktop application, enabling CRUD operations for user registration and login, as well as managing user schedules.
- Designed and implemented a secure user authentication system using Spring Security, JWT tokens, and BCrypt password hashing with JPA Hibernate and H2 database.
- Improved API responses by 50% by using JPA Hibernate's second-level cache and effective H2 database queries with the right indexes.

EDUCATION

Candidate for Mechatronics Engineering | September, 2022 - Present

University of Waterloo, Ontario

- Relevant Courses: MTE 100 - Engineering graphics and designs, MTE 121 - Introduction to C++, RobotC and Robotics Engineering, MTE 140 - Data Structures and Algorithms
- Awards: $2000 Entrance Scholarship for high performance in academics