

# JIE YANG

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## SKILLS

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**Programming Languages:** Java, JavaScript, TypeScript, Kotlin, C, C++, C#, Python, R, SQL, HTML, CSS

**Frameworks and Libraries:** Spring boot, React, Vue, Redux, Material UI, Express, Flask, Node.js, Mockito, PyTorch

**Platforms and Tools:** AWS, Azure, Git, MongoDB, MySQL, PostgreSQL, Postman, Docker, Kubernetes, Heroku

## EXPERIENCE

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### Amazon

Sep 2022 – Mar 2023

*Software Developer*

*Vancouver, BC*

- Collaborated with the team to manage and optimize transaction processing systems. Utilized AWS EC2 for robust computing power, coupled with AWS CloudWatch for real-time monitoring and performance analytics, ensuring efficiency and reliability in handling high volume transactions, including payment initiations, refunds, and chargebacks.
- Spearheaded the design and implementation of a robust retry mechanism to improve the server request reliability via payment channels, cutting the payment failure rate to **0 - 0.2%** from **2%** at peak times when communicating with downstream plugin servers.
- Pioneered a circuit breaker feature across diverse plugin services and using AWS CloudWatch for real-time monitoring, safeguarding the main server from the impact of faulty tier-2 services, resulting in a **95%** reduction in downtime.
- Took the initiative to build a priority-based request refusal feature, optimizing server efficiency by **24%** during peak periods by proactively rejecting low-priority requests nearing CPU limits.

### Ontario Government Ministry of Health and Long-Term Care

Sep 2020 – Sep 2021

*Software Developer Intern*

*Toronto, ON*

- Designed, implemented, and launched a user registration system, allowing differentiated access to features based on roles and permissions, enhancing the system security and stability by using MongoDB to store user roles information and integrate permission checks in React Router.
- Enhanced company's internal Excel plugin library, enabling customers to add categories and pre-load data from prior years in the online Excel editor, led to a **90%** decrease in manual data entry errors, by using a JavaScript web spreadsheet library called X-Spreadsheet.
- Implemented an email-based approval system using a Node.js library Nodemailer, allowing organization admins to directly approve or reject requests, which shorten the document review time by **50%**.
- Led the effort to shift from JavaScript to TypeScript, improving the development process and cutting compilation errors for engineers by **60%**.
- Migrated the service from GitHub to Azure and created a new pipeline in Azure DevOps. Automated the release process to build, package, and deploy our application into the Docker environment daily, and boosting overall product delivery speed by **80%**.

### Goldtech Information Ltd

June 2019 – Aug 2019

*Software Developer Intern*

*FuJian, China*

- Collaborated in developing SSH connection scripts using Paramiko, automating remote server management. This led to a **30%** decrease in error rates compared to manual operations.
- Developing a Python automated Excel report generation script for network security data by leveraging XlsxWriter, significantly improving the accuracy of report generation and reducing errors from **5%** to **0.5%**.

## PROJECTS

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### LeaderBoard

Aug 2023 – Sep 2023

- Developed a dynamic user ranking application, using Vue for the frontend and Flask for the backend, enhancing user interaction and data management.
- Integrated SQLite database for efficient data storage and retrieval, and successfully deployed the application on Heroku, ensuring easy online access.

### Law & Design Colab – Ontario Lease Wizard

Jan 2020 – May 2020

- Developed a web-based electronic signature application for rental contracts, slashing the signing process time by **70%**.
- Implemented a calendar sync feature using JavaScript, ensuring both tenants and landlords under a single lease view identical schedule.
- Revamped the front-end code base with React and Material UI, enhancing the development experience.

## EDUCATION

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### University of Toronto

Sep 2017 – July 2022

*Bachelor of Science in Computer Science and Statistic*

*Toronto, ON*