

# Derek(Dongjie) Liu

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## SUMMARY

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**Full-stack developer** with 2 years of experience building scalable web applications. Skilled in front-end (React.js, JavaScript, TailwindCSS) and back-end (Node.js, Express.js, SQL) technologies with expertise in RESTful APIs, database management(MySql, MongoDB), and cloud deployment(Azure, AWS).

## EDUCATION

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### University of Calgary

Sep 2019 - Apr 2024

Bachelor of Science in Computer Science

Calgary, AB

**Certification:** Python Project for Data Science - IBM ; React Basics - Meta; Python for Data Science AI & Development - IBM; JavaScript Programming with React Node & MongoDB - IBM; Databases and SQL for Data Science with Python - IBM

## EXPERIENCE

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### Callmentor Inc. (MVP Link)

Calgary, AB

Software Development Engineer

Jul 2024 – Feb 2025

- CallMentor is a mentorship platform connecting industry professionals with students and junior developers, helping them book mock interviews and resume review sessions with online payment.
- Developed user management system for mentorship platform using **Nest.js**, implementing **JWT** authentication and role-based access control supporting 500+ active users with 99.9% uptime.
- Built scheduling system with **TypeScript** and **MySQL** using interval trees to detect and resolve calendar conflicts, reducing double bookings by 70% for 100+ recurring appointments.

### RRSP Comparison Platform

Calgary, AB

Software Development Engineer

Dec 2024 – Mar 2025

- Developed a **React.js** application using **Next.js** with a **Node.js** and **MongoDB** backend, enabling automated tax savings calculations for RRSP vs. non-RRSP scenarios.
- Created responsive financial visualizations with Recharts.js and custom components, reducing financial decision time by 47% while boosting user engagement 32% through intuitive data presentation.
- Implemented multi-tier subscription system with Stripe API and real-time webhook processing, reducing payment failures by 9.5% and increasing conversion rates by 12.3% through optimized checkout flows.

### Education Management Platform

Calgary, AB

Software Development Engineer

Jan 2023 – May 2023

- Developed an online education platform allowing students to access courses, watch lectures, complete assignments and earn certificates.
- Built **MySQL** master-slave replication on **Azure**, configured one master with three slave databases, implemented read/write separation using **SequelizeORM**, reduced query response time from 200ms to 60ms.
- Developed file upload system with **Node.js** and **Express.js** that split large files into chunks, allowed interrupted uploads to resume, enabled uploads of 2GB course videos and improved completion rate by 40%.
- Set up **GitHub Actions CI/CD pipeline** for automated testing and deployment, implemented branch protection with required CI checks, reduced production bugs by 80% and deployment time to under 5 minutes.

## SKILLS

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Programming Skills: Java, Python, JavaScript, TypeScript, C#, Go, SQL, HTML/CSS

Tools: Git, Docker, Atlassian Jira, GitHub, GitLab, Github

Full Stack Development: Spring Boot, Django, ASP.NET, Node.js, Nest.js, RESTful APIs, OAuth2, JWT, express.js, Prisma, TypeORM, React, Next.js, MUI (Material-UI), TailwindCSS, JQuery, Redux

Cloud & DevOps: AWS (S3, Lambda, EC2), Redis, Message Queue, Nginx, Azure DevOps, Github Action CI/CD

Database Management: MySQL, PostgreSQL, MongoDB