

Jen Yang Koh

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EXPERIENCE

PCL Constructors Inc.

Software Developer

October 2021 – Present

- Established alerts and diagnostic scripts to address telemetry backlogs in high-throughput systems, reducing issue detection times by 50% and enabling immediate resolution for critical outages
- Developed an algorithmic predictive tool that automated camera positioning for optimal site coverage, reducing installation time by 50%, especially benefiting remote sites with limited internet access
- Spearheaded the architecture and development of the JSI™ mobile app using .NET MAUI, providing a user-friendly interface for construction site management that led to an increase in mobile user adoption by 92%
- Designed and documented scalable end-to-end data pipelines, identifying redundancies and optimizing workflows to streamline operations and cut costs by 90%, delivering significant budget savings
- Designed and implemented new portal features tailored to customer use cases, such as geozone object detection and fence intrusion alerts, enhancing functionality to address evolving client needs and improve overall customer satisfaction
- Optimized deployment pipelines to improve infrastructure reliability and scalability, resolving race conditions and achieving a 95% deployment success rate, while reducing engineer interaction with the automation process by 40%
- Directed a cross-functioning team to develop and deploy IoT solutions to monitor and optimize construction site operations, achieving a 30% improvement in end-to-end streaming latency by implementing event queue auto-scaling and device-based partitioning to prioritize time-sensitive data processing, ensuring high system performance and reliability

Construction Technology Analyst

June 2021 - October 2021

- Coordinated and executed technology upgrades and system enhancements across PCL's main Edmonton campus, acting as the primary technical liaison and ensuring seamless deployment and integration with existing infrastructure
- Delivered high-level technical support for executive teams, including quick resolutions to IT issues, system troubleshooting, and proactive support measures to minimize downtime for critical personnel
- Developed and deployed PowerShell scripts to automate data backup and migration, streamlining workflows and reducing manual labor by 20%, leading to notable time and cost savings for the team

PROJECTS

DouDou | *React, TailwindCSS, ShadCN, Supabase, S3*

Oct 2024 – Present

- Developed an interactive photo voting app, allowing users to initiate and manage photo voting sessions
- Implemented a multi-phase workflow where users can join sessions, submit photos, and vote on submissions, with session owners controlling the process flow from start to finish
- Enabled real-time voting and tracking, allowing session owners to finalize the top most-voted photos, facilitating in-person prize awards for winning entries

SE-OER | *React, Material-UI, Django, PostgreSQL*

January 2020 – May 2020

- Led a team of 4 in developing a collaborative web application for practicing Software Engineering topics through interactive flashcard-style quizzes
- Developed a web application that enabled users to create, customize, and quiz themselves on topic-specific questions, simulating exam-like conditions to reinforce knowledge retention
- Directed team efforts on the development of a user-friendly platform for collaborative learning and self-assessment, fostering peer-driven study and continuous skill improvement

EDUCATION

University of Alberta

Edmonton, Alberta, Canada

Bachelor of Science in Computer Science, Minor in Psychology

TECHNICAL SKILLS

Languages: Typescript, Javascript, C#, Golang, SQL (Microsoft SQL Server), HTML/CSS

Frameworks: Angular, React, TailwindCSS, ShadCN, .NET, .NET MAUI, React Native

Developer Tools: Git, Docker, Azure Pipelines, Microsoft Azure, VS Code, Visual Studio

Libraries: Fusioncharts, RxJS