# Josh Lin

647-891-5329 | jiexulin99@gmail.com | linkedin.com/in/jiexulin | github.com/linj121

## Education

**McMaster University** Hamilton, ON
*Bachelor of Applied Science in Honours Computer Science* *September 2018 – April 2023*

## Technical Skills

**Languages**: JavaScript, CSS, HTML, Python, SQL, Shell
**Web Technologies**: TypeScript, ReactJS, NextJS, NodeJS, Express, Prisma, PostgreSQL, MongoDB, GraphQL
**Devops**: Jenkins, Nginx, Docker, K8S, AWS, GCP
**AI/Data**: Anaconda, Numpy, Panda, Pytorch, OpenCV
**Tools**: Git, Github, Jira, Excel

## Experience

**Data Analyst Intern** June 2021 – January 2022
*Didi Global Inc.* *World Leading Tech Company*

- Leading a team of 3 in building a live stream platform from scratch, employing the **Agile** approach, reviewing **PR** and solving code conflicts using **Git**, and writing technical documents to guide the team
- Conceptualized user-friendly UI designs using Figma, implemented them using **React**, **Redux**, **MUI**, utilized **GraphQL** for communication with backend services and established end-to-end tests with **Cypress**
- Mitigated a notable latency issue in HLS streaming by transitioning to **WebRTC** protocol, reduced the live stream latency from 8s down to **300ms** $\sim$ **1.8s**, which ensured real-time communication
- Tackled the scalability challenge in WebRTC peer-to-peer connections by leveraging a media server for handling concurrent streams, significantly reduced client side burden and improved **system scalability**
- Fortified stream security and implemented user authentication by developing a **REST API** that reacts to the **Webhook** of the media server, utilizing **NodeJS**, **Express**, **Prisma**, **MongoDB**, and **JWT** (Json Web Token)
- Reduced system resource consumption by utilizing **Webhook** for on-demand stream publishing and playing
- Integrated object detection into live stream with a latency under 2s, using **OpenCV**, **Django** and **FFmpeg**
- Improved development productivity by automating **CI/CD** pipeline for frontend and multiple backend services using **Jenkins**, **Docker Compose** and **Nginx** on **GCP** (Google Cloud Platform)

**Data Analyst Intern** June 2021 – Jan 2022
*Didi Global Inc.* *Beijing*

- Utilized funnel analysis across various dimensions to tackle customer churn, and collaborated with operations department to boost monthly customer retention rate by **5.2%** and GMV by **2.8%**
- Addressed customer inactivity issue by designing a lifecycle framework, aiding the data department in setting up a DWM table, which enhanced analysis **efficiency** and laid a solid foundation for future analysis
- Improved work efficiency and reduced manual work by automating daily **HiveSQL** data extraction and Excel report generation utilizing **Python** integrated with chatbot API, which ensured timely report sharing

## Projects

**xRangerRtms** | *TypeScript, React, MobX, Flask, Django, PostgreSQL, Git* January 2023 – April 2023

- Collaborated in a team of 4 using **Agile** methodologies to develop a real-time online monitoring and management system, enabling customers to track robot locations and statuses effectively and efficiently
- Conceived a user-friendly frontend interface using **TypeScript** and **ReactJS**, streamlining the monitoring of robot statuses, alerts, and notifications. Amplified UI aesthetics using **Bootstrap-React, Font Awesome, and SCSS**, and utilized **MobX** for application state management
- Orchestrated a model for maintaining robot data using the **MVC** pattern, retrieving real-time and historical data from the xRangerTelemetry backend **REST API** asynchronously
- Devised a reference counting mechanism using React useEffect hook to start and stop updates for the robot model based on usage across different components. This strategy decreased http requests, reduced backend server load by **13%**, and ensured data consistency across all components