

Justin Lai

Justin6001@gmail.com | (905) 805-6882 | [linkedin.com/in/justin-lai263/](https://www.linkedin.com/in/justin-lai263/)

EDUCATION

The University of Western Ontario | London, ON

Graduated Dec 2024

Bachelor of Science in Computer Science

- **Relevant Coursework:** Operating Systems, Object-Oriented Programming, Data Structures, Software Engineering, Database Management Systems, Web Development, Computer Networks, Machine Learning, Algorithms, and Computer Architecture

TECHNICAL SKILLS

Programming Languages: Python, Java, C, C++, JavaScript, HTML, CSS, SQL, and Assembly

Operating Systems: Windows, Linux

PROJECTS

Injury Prevention Web App | Personal Project

Sept 2024

- Built a full-stack web application to assist runners in preventing injuries by analyzing activity data from Strava
- Integrated **Strava API** to fetch real-time user data (distance, elevation, pace) and predict injury risks based on training patterns
- Backend: Developed RESTful services using Node.js and Express for handling user sessions and activity tracking
- Database: Designed and implemented NoSQL schemas with **MongoDB** and Mongoose for efficient data persistence.
- Authentication: Secured platform using OAuth 2.0 for Strava login
- Frontend: Created responsive and interactive user interfaces with HTML, CSS, and EJS for dashboards and activity tracking features
- Technologies used: Node.js, MongoDB, Express.js, HTML, CSS, EJS, Strava API

Video Playback Chrome Extension for YouTube | Personal Project

Oct 2024

- Developed a Chrome extension enabling users to adjust video playback, including mirroring, speed changes, and looping from specific timestamps
- Designed specifically for users like dancers to practice with precise control over video playback
- Technologies used: HTML, JavaScript, CSS

Sleep Better App | School Project

Sept - Dec 2024

- Developed a desktop application to help users track and analyze their sleep patterns, habits, and overall sleep quality
- Designed and implemented key features
- Built the application with **Qt Framework** (C++) for a responsive and user-friendly GUI
- Followed Object-Oriented Design principles to ensure modularity, maintainability, and scalability

Predicting Outcomes of NBA Statistical Bets | School Project

Sept - Dec 2024

- Developed predictive models for NBA match outcomes and player performances using Python and machine learning libraries
- Implemented and compared a linear regression model with 5-fold cross-validation and an artificial neural network
- Extracted and pre-processed data using Python, emphasizing relevant player statistics such as home/away performance, career averages, and matchup-specific metrics
- Visualized results using graphical tools to present model effectiveness and provide actionable insights for sports bettors
- Technologies used: Python, NumPy, Pandas, Scikit-learn, and Matplotlib