Benjamin (Kai-Nan) **Chang**

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Work Experience

Visier Inc. *Vancouver, BC*

Software Developer Intern *Sep. 2021 - Present*

- Working in full-stack agile web development using Scala & Angular
- Implemented frontend UI with backend for new homepage feature allowing admins to set an analysis for display when users sign in to Visier, enabling them to quickly scan details about their organization
- Helping build new application feature for reporting, flagging and fixing data issues in tenant versions

University of British Columbia *Vancouver, BC*

PrairieLearn Developer *Apr. 2021 - Present*

- Frontend development position for UBC's online assessment platform PrairieLearn for CPSC 203
- Designed and implemented 200+ exam and test questions using Python/Java/C++ and HTML
- Incorporated randomized question data generation and customized auto-graders to minimize cheating, resulting in our course reporting some of the lowest numbers of academic dishonesty in the department
- Created new lab content as well as auto-graders for the programming assignments eliminating the need for teaching staff to spend time on grading and focusing more on office hours and course development

University of British Columbia *Vancouver, BC*

Python Developer *Sep. 2020 - Apr. 2021*

- Using Canvas API, helped UBC course instructors transition course resources online for remote learning
- Worked on md2canvas, a package to create Canvas quizzes in markdown and directly exporting them to Canvas bypassing any manual setup, this helped instructors reduce time spent on quiz setup by roughly 50%
- To improve workflow, wrote a script to extract iClicker questions from lecture slides into md2canvas format

Projects

League of Legends Champ Predictor *Link*

Python, pandas, scikit-learn, tkinter *Dec. 2021*

- Built and tuned a classification model to predict the champion with highest chance of victory to play based off of teammates and opponents' selections in champ select
- Used Riot API to fetch match history, Pandas dateframes to format/clean data before running through a ML pipeline which included pre-processing (column transforming) and hyperparameter tuning
- Built a GUI with tkinter so team/enemy champions can be entered easily alongisde game client
- Prediction accuracy around 40% but win-rate with predicted champion is around 90%

Gym 18 *Link*

Java, SQL, Swing *Jun. 2021*

- Designed and implemented a database system to model the inner workings of a fitness center like a gym
- Using Java + Oracle, we created an application providing access to a custom database with multiple functions through the GUI: registering accounts, booking training sessions, creating/following diet plans

Perfect Pitch *Link*

Android Studio, Kotlin *Jul. 2020*

- An audio-based chord guessing game created for my music students for remote learning during COVID
- Published in the Google Play store and used by my music students as part of their weekly practice
- Since deployment, students' ear tests have improved greatly: $\sim$ 50% increase in perfect scores in annual exams

Technical Skills

Languages	Python, Java, Typescript, Javascript, Scala, R, C++, Kotlin, Swift
Frameworks/Libraries	Angular, React, Pandas, numpy, scikit-learn, JUnit, Swing, SwiftUI
Tools/Technologies	Git, Android Studio, Microsoft Excel, PrairieLearn

Education

University of British Columbia *Vancouver, BC*

BCS - Bachelors in Computer Science *Sep. 2020 - Present*

- Anticipated Graduation: April 2023
- Courses: Data Structures, Algorithms, Software Engineering, Machine Learning, Relational Databases

University of British Columbia *Vancouver, BC*

BSc in Life Sciences and Chemistry *Sep. 2015 - Apr. 2020*