Benjamin (Kai-Nan) Chang

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Education

University of British Columbia — Vancouver, Canada
BS in Computer Science — *Anticipated Grad: Apr 2024*

- *Courses*: *Software Engineering, Data Structures & Algorithms, Computer Systems, Relational Databases, Data Science*

Work Experience

Shopify — Remote
Data Scientist — *Sep 2022 - Present*

- Led project on merchant workflow, writing metrics to measure merchant efficiency and investigating how to optimize merchant workflow: led to creation of the merchant bulk action feature which helped improve merchant efficiency by 60%
- Performed analytics on orders with fulfillment similarities which drove engineering decisions on merge orders feature
- Currently leading the Core Deliver portion for Shopify Summer Editions (a bi-annual publication on the newest Shopify releases), measuring Type 2 adoption for the 10+ newest feature releases from the Deliver engineering team
- Wrote a generic query that has been adopted by the 20+ data teams writing queries for the Shopify Editions project, the generic query has been a template for almost 200 Type 2 adoption queries and reduced coding time from hours to minutes

Developer / Data Intern — *May 2022 – Aug 2022*

- Worked both as a developer and data scientist for the Core Deliver Team writing code in Ruby, SQL and Python
- *Engineering Project*: wrote new GraphQL & REST endpoints for the 40+ possible merchant actions on orders, also logged endpoint calls to a Kafka dataset for data science teams to use for tracking and analyzing merchants' admin order actions
- *Data Project*: analyzed a merchant's use of specific back-office apps to their correlations with different metrics for shop performance: shop tier, revenue, etc., displayed on a comprehensive dashboard used by 10+ internal data and business teams

Visier Inc. — Vancouver, Canada
Software Developer Intern — *Sep 2021 – Apr 2022*

- Worked as a full-stack web developer in an AGILE environment, coding in Typescript/Angular (frontend) & Scala (backend)
- *Intern Project*: Visier Home, a complete revamp of the Visier application homepage for customized user-focused homepages
- Implemented a page for admin-level users to easily add/remove Visier's flagship analytic metrics for display to target users
- Wrote new REST feature endpoints and created a dynamic user homepage view for rendering the admin metric selections

University of British Columbia — Vancouver, Canada
Principal Developer — *Apr 2021 - Present*

- Leading a team of CS students in deploying UBC courses on PrarieLearn: a web-based testing platform & learning system
- Design new content, onboard & assign work to new members and review code changes in either Python, Java or C++
- Implemented *pl-autograder*, a custom Python package for PrarieLearn questions capable of auto-grading a student's code from the signature & function implementation to the documentation and the student's test coverage
- Collectively pushed 400+ PrarieLearn questions across 3 CS classes, a PL questions consists of: a frontend rendering of the question, a customized auto-grader, a randomization algorithm to generate the question data for different student variants

Teaching Assistant — *Sep 2019 - Present*

- Leading office hours and labs for 400+ students in various courses: Introductory Programming, Data Structures & Algorithms
- 2-time recipient of the CS Undergraduate Teaching Assistant Award and co-creator of new CS course on data structures

Projects

Visualizing Tech Salaries *(Typescript, Javascript, Python, HTML/CSS, D3)*

- Built an interactive dashboard to visualize tech salaries using data scraped from **levels.fyi**. D3 visualizations include choropleth maps, histograms, bar charts capable of multi-directional filtering by location, salary, company, level and role.

InsightUBC *(Typescript, Javascript, HTML/CSS, Node.js, mocha, chai)*

- Built a RESTful web application for querying info on courses, buildings or classrooms at UBC. Implemented a custom database system capable of simple queries, filtering to compound aggregations and sorting using data from UBC archives.

League of Legends Champion Predictor *(Python, pandas, scikit-learn, tkinter)*

- Built and tuned a classification model to predict champion with highest winning chance based on team and enemy selections
- Fetched data with Riot API and passed through pipeline of tidying, a custom column transformer and hyperparameter tuning
- Testing revealed prediction accuracy of roughly 40% but win rate with predicted champion has been around 90%

Technical Skills

Languages	Python, Java, C/C++, Typescript, Javascript, Scala, Ruby, SQL
Technologies	Rails, Angular, Node.js, Kafka, Spark, Hive, Docker, PrairieLearn