Vancouver, BC
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Joshua Phang

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I am an enthusiastic full-stack software engineer especially interested in solving challenging problems, working with machine learning algorithms, and committed to deploying scalable projects to production.

Professional Experience

Full-Stack Developer **TasteBuds** **Sep 2024 – Present**
Richmond, BC

- Developed a recipe suggestion app that offers recipe suggestions based on ingredients stored in a user's pantry.
- Created a minimal Application Program Interface using ASP.NET to perform essential CRUD operations on a locally hosted Microsoft SSMS database.
- Designed an efficient database using T-SQL queries to store user data such as ingredients owned, favourite recipes, user login information, and shopping cart items.
- Applied front-end development expertise to design and build modular web pages using Angular, ensuring reusable and maintainable components.
- Refactored application User Interfaces to create a mobile version of the app using Flutter and supplementary API calls from TheMealDB.

Machine Learning Developer **Credit Card Fraud Detection** **Jan 2024 – Apr 2024**
Prince George, BC

- Teamed up with Qing Zhao, a graduate student at UNBC, to work on a research project regarding the improvement of credit card fraud detection by using different machine learning models in combination with various sampling techniques including SMOTE and Random Under Resampling.
- Testing results were produced by applying and fine-tuning SVC, Logistic Regression, MLP, and Decision Tree models on a European dataset taken in 2013 totaling 284,870 transactions.
- Applied ensemble techniques such as bagging, but found that these actually reduced performance when combined with sampling techniques in this use case.
- Used scikit-learn and TensorFlow libraries in Jupyter and Google Colab, in addition to the Seaborn library for data visualization.

Full-Stack Developer **Persongify** **Jun 2022 – Aug 2022**
Surrey, BC

- Worked in a team of 5 to develop a full stack web application, working in an Agile development environment to improve project-wide communication and hasten project delivery.
- Developed an application that provided users the ability to create Spotify playlists based on their personal preferences and commute times.
- Implemented functionality for saving playlists to user's Spotify accounts and sharing on Facebook feeds.
- Developed back-end functions for API calls in NodeJS for secure and reliable data retrieval and updating of Spotify accounts and playlists.
- Implemented database support using PostgreSQL enabling secure user account creation with SHA-2 password encryption.

- Utilized Spotify API calls for playlist generation, account management, and song playback features.
- Utilized Google Maps API calls for commute time calculation and location tracking, and Facebook API calls for sharing of generated playlists.

Additional Work Experience

Math Teacher | **Private Tutoring** | **Sep 2018 – Present**
Part Time | Richmond, BC

- Designed and implemented customized lesson plans to address individual student learning styles and mathematical abilities, resulting in measurable improvement in test scores and confidence.
- Utilized a variety of teaching techniques-including visual aids, interactive exercises, and real-life problem-solving-to simplify complex mathematical concepts for students from elementary through high school levels.
- Demonstrated strong organizational and time-management skills by efficiently scheduling sessions and balancing the needs of multiple students.
- Maintained detailed records of session content, student achievements, and areas requiring further attention to ensure continuity and personalized instruction.

Coding Instructor | **Code Ninjas** | **Sep 2022 – Aug 2024**
Part Time | Richmond, BC

- Introduced elementary and middle school students to code creation and simple game design with a team of instructors to facilitate early learning and interest in coding.
- Taught important fundamental concepts such as objects, conditionals, and loops through Scratch and JavaScript in a fun and engaging way, ultimately expanding our facility from less than 50 students to over 150 young coders.
- Reinforced strong and proper coding foundations that led to a student winning first place in Code Ninja's *International Ghostly Game Jam*

Technologies and Languages

- **Languages**: Java, Python, JavaScript, TypeScript, HTML, CSS
- **Technologies**: T-SQL, Postgres, Git, React, AngularJS, Flutter, .NET, TensorFlow, sci-kit learn, Keras
- **Other**: Data structures and algorithms, Machine learning, Software

Education

- **B.Sc. Computer Science, Minor in Mathematics** **2021-2025**
  University of Northern British Columbia

Relevant Coursework

- **Introduction to Data Mining**, (A) **Apr 2025**
- **Advanced Database Systems**, (A+) **Apr 2025**
- **Data Structures II**, (B+) **Apr 2025**
- **Software Engineering**, (A) **Dec 2024**
- **Applied Machine Learning**, (A-) **Dec 2024**
- **Algorithm Analysis & Development**, (A-) **Apr 2024**
- **Introduction to Concurrent/Distributed Programming**, (A+) **Apr 2024**