

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

<b>Full-Stack Developer</b>	<b>TasteBuds</b> Richmond, BC	<b>Sep 2024 – Present</b>
<ul style="list-style-type: none"><li>Developed a recipe suggestion app that offers recipe suggestions based on ingredients stored in a user's pantry.</li><li>Created a minimal Application Program Interface using ASP.NET to perform essential CRUD operations on a locally hosted Microsoft SSMS database.</li><li>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.</li><li>Applied front-end development expertise to design and build modular web pages using Angular, ensuring reusable and maintainable components.</li><li>Refactored application User Interfaces to create a mobile version of the app using Flutter and supplementary API calls from TheMealDB.</li></ul>		
<b>Machine Learning Developer</b>	<b>Credit Card Fraud Detection</b> Prince George, BC	<b>Jan 2024 – Apr 2024</b>
<ul style="list-style-type: none"><li>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.</li><li>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.</li><li>Applied ensemble techniques such as bagging, but found that these actually reduced performance when combined with sampling techniques in this use case.</li><li>Used scikit-learn and TensorFlow libraries in Jupyter and Google Colab, in addition to the Seaborn library for data visualization.</li></ul>		
<b>Full-Stack Developer</b>	<b>Persongify</b> Surrey, BC	<b>Jun 2022 – Aug 2022</b>
<ul style="list-style-type: none"><li>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.</li><li>Developed an application that provided users the ability to create Spotify playlists based on their personal preferences and commute times.</li><li>Implemented functionality for saving playlists to user's Spotify accounts and sharing on Facebook feeds.</li><li>Developed back-end functions for API calls in NodeJS for secure and reliable data retrieval and updating of Spotify accounts and playlists.</li><li>Implemented database support using PostgreSQL enabling secure user account creation with SHA-2 password encryption.</li></ul>		

- 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

<b>Math Teacher</b> Part Time	<b>Private Tutoring</b> Richmond, BC	<b>Sep 2018 – Present</b>
<ul style="list-style-type: none"> <li>• Designed and implemented customized lesson plans to address individual student learning styles and mathematical abilities, resulting in measurable improvement in test scores and confidence.</li> <li>• 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.</li> <li>• Demonstrated strong organizational and time-management skills by efficiently scheduling sessions and balancing the needs of multiple students.</li> <li>• Maintained detailed records of session content, student achievements, and areas requiring further attention to ensure continuity and personalized instruction.</li> </ul>		
<b>Coding Instructor</b> Part Time	<b>Code Ninjas</b> Richmond, BC	<b>Sep 2022 – Aug 2024</b>
<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• Reinforced strong and proper coding foundations that led to a student winning first place in Code Ninja's <i>International Ghostly Game Jam</i></li> </ul>		

## 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** **Apr 2025**
- **Advanced Database Systems** **Apr 2025**
- **Data Structures II** **Apr 2025**
- **Software Engineering** **Dec 2024**
- **Applied Machine Learning** **Dec 2024**
- **Algorithm Analysis & Development** **Apr 2024**
- **Introduction to Concurrent/Distributed Programming** **Apr 2024**