William Robert Ko

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SUMMARY

Motivated and adaptable CS Student Developer with hands-on experience in full-stack development, cloud integration, and machine learning projects. Skilled in Java, Python, and JavaScript, with a strong passion for Agile methodologies, testing practices, and collaborative problem-solving. Eager to learn, grow under mentorship, and take on new challenges. Proven ability to contribute to scalable, user-centric software solutions while embracing continuous learning and team-driven success.

CODING SKILLS

Languages: Java (2 yr), Python (2 yr), C# (1 yr), MySQL (4 yr), JavaScript (4 yr), HTML/CSS (4 yr), R (1 yr), PHP (3 yr)
Frameworks: React, Node.js, JUnit, WordPress, XAMPP
Developer Tools: Git, VS Code, Visual Studio, IntelliJ, Anaconda, Google Colab, Jupyter Notebook, Linux/Powershell, Bootstrap
Libraries: pandas, NumPy, Matplotlib

SOFT SKILLS

Strong People Leadership Abilities: Developed through work and as VP Internal for UBC Quantum Club
Effective Teamwork and Independent work skills: Honed in participating in hackathon teams and classes
Strong communication skills, Creativity, Excellent work-ethic, Adaptability, Time management, and Organization
Public Speaking & Presentation delivery: Experienced in leading tours, orientations, and large-scale student events.
Student Advising & Peer Support: Skilled in supporting new and prospective students with empathy and clarity.
Event Planning & Coordination Organized social, academic, and onboarding events for 45-200+ participants.
Cross-Cultural Communication: Comfortable engaging with diverse and international student populations.
Interpersonal & Team Leadership Developed through student leadership, peer roles, and collaborative projects.
Self-Motivated & Organized: Strong time management and independence in fast-paced settings.
Valid Driver's License & First Aid Certified

EDUCATION

University of British Columbia   Vancouver, BC
Bachelor of Science in Cognitive Systems: Brain and Cognition   *Expected Graduation: May 2027*

Classes: Applied Machine Learning, Basic Algorithms & Data Structures, Software Construction, Symbolic Logic, Intro to Artificial Intelligence, Intro to Data Science, Cognitive Systems

TECHNICAL WORK EXPERIENCE

Program Assistant and Developer | *AWS, Linux*   *June 2023 – October 2023*
Learning Buddies Network   *Vancouver, BC*

- Researched, presented, and implemented secure database replication through R-Sync and AWS, enhancing data reliability by 40% and reducing backup errors
- Optimized training material organization in Google Drive, increasing team collaboration efficiency by 70% and reducing retrieval time for resources by 50%
- Printed, organized, and assembled 150+ tutoring kits for our free one-on-one tutoring programs across Metro Vancouver and indigenous communities in the Lower Mainland of British Columbia

Full Stack Intern | *JavaScript, PHP, MySQL, HTML, CSS, Bootstrap*   *April 2021 – December 2021*
11Trees   *Austin, TX (Remote)*

- Redesigned the 'edit' functionality in AnnotatePro, a platform for educators to share and manage grading comments. Leveraged MySQL queries and AJAX calls to enhance the user experience, making it 30% more efficient. Streamlined the UI using HTML, CSS, PHP, and Bootstrap, allowing teachers and professors to easily update and share their comment libraries.
- Developed an advanced search function leveraging MySQL queries and AJAX calls to retrieve user-specified comments, reducing search time by 40%, and implemented a Bootstrap-powered pop-up modal with HTML, CSS, and PHP, boosting user satisfaction by 25%.

UBC Science Co-op   science.coop@ubc.ca | 604-822-9677

CLIENT-FACING WORK EXPERIENCE

Jump Start Orientation Leader
August 2024 – September 2024

UBC Centre for Student Development and Leadership
Vancouver, BC

- Facilitated Smooth Student Transition, and organized and led orientation activities that provided peer assistance to incoming freshmen.
- Collaborated with faculty to provide resource guidance and to increase student engagement.
- Organized and managed social event for groups ranging from 45 to 200+ students over a few days.
- Conducted daily meetups and regular check-in's to ensure a smooth onboarding process for the incoming students, developing key interpersonal, leadership and organizational skills for effective student integration.

Live-In Monitor
June 2024 – August 2024

UBC Camps/Future Global Leaders
Vancouver, BC

- Worked collaboratively with the other monitors to organize and run activities for a thousand students such as icebreakers and other games, host evening events such as Karaoke night, and run a farewell celebration
- Provided emotional and physical support to students such as first-aid, trips to the hospital, and chatting with the students
- Served as a chaperone during field trips around Vancouver with the students

Lifeguard and Swim Instructor
May 2022 – August 2022

City of Phoenix Aquatics
Phoenix, Arizona

- Created customized swim curricula for different age groups of students of different cultures when teaching lessons and provided relevant feedback to parents
- Worked collaboratively with the other guards to create a safe environment and administer first aid as needed
- Provided a safe and educational environment for teaching swim curriculum for kids ages 7-14 resulting in all students across 3 classes successfully moving onto the next education level

PROJECTS

SAM: Sarcasm Authentication Model | *Python, React Native, HuggingFace, Pandas* January 2025 - Present

- Developed a Machine Learning-based Python app to detect sarcasm, inspired by my experiences as someone with Autism Spectrum Disorder and the challenges that sarcasm presents for people with social difficulties.
- Developed a novel sarcasm detection model using contextual reinforcement, leveraging previously gathered non-sarcastic statements as a reference to improve classification accuracy—overcoming the limitations of traditional models that rely solely on isolated textual features.
- Built and trained an ML model using a HuggingFace sarcasm database to improve accuracy and reliability.

Cook Zillion | *JavaScript, PHP, MySQL, HTML/CSS, XAMPP* March 2024 - July 2024

- Developed a full-stack web app to simplify meal planning by integrating personalized cookbooks and public recipe collections, improving user engagement and efficiency.
- Built an inventory management system to track tools and ingredients using MySQL and PHP, enabling large-scale storage and reducing ingredient shortages.
- Created a recipe-matching feature to suggest meals based on available ingredients using JavaScript and MySQL queries, optimizing food usage and decision-making.

UBCOnTime (Hackathon Project) | *JavaScript, CSS, HTML, Node, and Express* January 2023

- Developed a web app to help students manage class schedules and estimate walking times between locations by integrating .ics file processing with Google Maps API, reducing late arrivals and optimizing campus navigation.

CREDENTIALS

MTA: Mobility and Device Fundamentals | *Microsoft Technology Associates* December 2021

MTA: Introduction to Programming Using Java | *Microsoft Technology Associates* February 2021

MTA: Introduction to Programming Using Python | *Microsoft Technology Associates* February 2021

MTA: Introduction to Programming Using JavaScript | *Microsoft Technology Associates* December 2020