JOSHUA LIN

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EDUCATION

University of British Columbia <div align="right">Expected: Dec 2025</div>
BSc In Computer Science
- Relevant Courses: Software Engineering, Algorithms and Data Structures, Relational Databases, Applied Machine Learning

EXPERIENCE

Software Development Engineer Intern <div align="right">Jan 2025 - Apr 2025</div>
Amazon Robotics | Java, ReactJS, TypeScript, JavaScript <div align="right">*Toronto, ON*</div>
- Developing real-time dashboards for **300+** Amazon Fulfillment Centers by implementing advanced observability systems that tracked over 1 million autonomous robots and **750,000+** storage pods, and designed automated alerts for spillage, robot malfunctions, and navigation anomalies—enhancing operational efficiency and reducing downtime by **5%**
- Developing load testing strategies for Amazon Kinesis Data Streams to evaluate the impact of increased TPS relative to enhanced parallelism through additional CPU resources

Software Engineer Intern <div align="right">May 2024 - Present</div>
Microsoft | WinRT, WinUI, C++, C#, XAML <div align="right">*Redmond, WA*</div>
- Integrated Bing Visual Search into the Windows Photos app, enabling **8+ million** monthly active users to search for related photos on Bing with a latency of just **500 milliseconds**
- Created the "Edit in Photos" shortcut in File Explorer, enabling users to quickly open and edit images in the Photos Editor via a right-click menu option, resulting in an increase of **10+ million** visits to the Photos App Editor per month.
- Implemented the "What's New" feature using the **MVVM** architecture, delivering timely updates on the latest features to **500+ million** monthly active users of the Photos App

Software Development Engineer Intern <div align="right">May 2023 - Aug 2023</div>
Amazon | Java, TypeScript, HTML, CSS <div align="right">*Vancouver, BC*</div>
- Developed and deployed a Java-based internal tool that retrieves and analyzes key buyer habits and past purchase interactions, enabling personalized product recommendations with a latency of under **150 milliseconds**
- Enhanced the core user experience for **2+ million** Amazon mobile app users by upgrading the Your Orders Carousel with dynamic visual showcases of buyers' past interactions through A/B web experiments, resulting in a more engaging and personalized shopping experience

Software Developer Intern <div align="right">Sept 2022 - Dec 2022</div>
SAP | JavaScript, SQL, Kubernetes <div align="right">*Vancouver, BC*</div>
- Developed Grafana and Prometheus monitoring tools in Kubernetes clusters for internal SAP HANA tools, specifically the Asynchronous Task Service (ATS) and Distributed Job Manager (DJM), enhancing system observability and performance
- Optimized performance for ATS and DJM by dynamically adjusting cluster nodes and pod deployments, resulting in a **~10%** reduction in task execution time and a **~15%** decrease in timeout jobs

Software Engineer Intern <div align="right">May 2022 - Aug 2022</div>
Google | Python, Django <div align="right">*Mountain View, CA (Remote)*</div>
- Developed and published a command-line tool conformance checker to **PyPI** to validate SPDX-formatted Software Bill of Materials (SBOM) against the National Telecommunications and Information Administration's (NTIA) elements guidance as part of Google Summer of Code
- Deployed the NTIA Conformance Checker on **tools.spdx.org**, enabling **30,000+** monthly users to upload SBOMs and verify data completeness

Computer Science Teaching Assistant <div align="right">May 2022 - Present</div>
UBC | Python, TypeScript, HTML, Docker
- *CPSC 310 Introduction to Software Engineering:* Instructed fundamental software design principles: architectural design, object-oriented design, and design patterns
- *CPSC 210 Software Construction:* Instructed students on fundamental OOP concepts, covering classes, objects, inheritance, and polymorphism
- *CPSC 110 Computation, Programs, and Programming:* Designed auto-graded functional programming questions using Python, HTML, and Docker

OPEN SOURCE WORK

spdx/ntia-conformance-checker
The NTIA Conformance Checker checks for minimum elements that are "the essential pieces that support basic SBOM functionality and will serve as the foundation for an evolving approach to software transparency"
- Utilized existing SPDX libraries to parse and log errors while checking if the SBOM contains the minimum required data fields: supplier/component name, component version, unique identifiers, dependency relationships, author, and timestamps
- Created a command line tool that outputs machine-readable JSON containing the missing fields of an SBOM
- **Merged pull request**: Deployed the NTIA Conformance Checker API to **tools.spdx.org** for **30,000+** monthly users

TECHNICAL SKILLS

Coding Languages: C, C++, C#, Java, Python, JavaScript, TypeScript, HTML, CSS
Frameworks and Libraries: WinRT, WinUI, XAML, React, Redux, MySQL, SQL, SwiftUI, Spring, .NET, React, Django
Developer Tools: AWS, Azure, Docker, Git, Postman, Retool, Figma