

JOSHUA LIN

(604)-671-0627 linynjosh@gmail.com <https://linynjosh.github.io/>

EDUCATION

University of British Columbia

BSc In Computer Science

Vancouver, BC

September 2020 – Present

- **Relevant Courses:** Applied Machine Learning, Relational Databases, Algorithms and Data Structures, Computer Hardware and Operating Systems, Internet Computing, Software Engineering.

Work EXPERIENCE

Amazon

Software Development Engineer Intern

Vancouver, BC

Summer 2023

- Creating solutions to run predictions on distributed systems with exposure to innovative technologies at incredible scale and speed.

SAP

Software Developer Intern, HANA and Analytics

Vancouver, BC

Fall 2022

- Developed software end-to-end: elaborated requirements, coded features and automated tests, and troubleshooted and resolved production problems.
- Built Grafana and Prometheus monitoring tools for the ATS and DJM Kubernetes clusters.
- Used a test-driven approach to create both official and testing API endpoints for the Asynchronous Task Service and the Distributed Job Manager.
- **Tools:** Grafana, Prometheus, Docker, Kubernetes, Javascript/Typescript.

Google Summer of Code

Open Source Developer

Remote

Summer 2022

- Built a conformance checker to verify if a software bill of materials (SBOM) in SPDX format follows the National Telecommunications and Information Administration's elements guidance.
- Created a command line tool using Click for users to determine the missing elements of a specified SBOM.
- Added an official API endpoint for the NTIA Conformance Checker into the SPDX Online Tool.
- **Tools:** Python, Javascript, Django, HTML, css.

Teaching Assistant (Faculty of Computer Science)

CPSC 210 Software Construction @ UBC

Remote

Summer 2022

- Designed programming questions in Java and constructed test suites with auto graders in Docker containers.
- **Tools:** Java, Docker, HTML

CPSC 110 Computation, Programs, and Programming @ UBC

- Designed auto-graded conceptual coding questions using Python, HTML, and Docker.
- **Tools:** Python, Docker, HTML

Open Source PROJECTS/CONTRIBUTIONS

[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.

[spdx/spdx-online-tools](#)

The SPDX online tool provides an easy all-in-one place to upload and parse SPDX documents for validation, comparison, conformance check, conversion and search SPDX license list.

- [Contribution/Pull request](#): Added the official NTIA Conformance Checker API endpoint to tools.spdx.org, allowing users to upload SBOMs to check for missing data fields.

[spdx/tools-python](#)

The tools-python library is a Python library to parse, validate, and create SPDX documents.

- [Contribution/Pull request](#): Reimplemented the parse_file function to handle file names that end with spdx or documents with incorrect or unspecified file extensions.

Personal PROJECTS

[Real Estate Search Portal](#)

A real estate database that lets sellers post listings and buyers search for listings.

January 2022 – Mar 2022

- Entities were normalized using BCNF decomposition to eliminate insertion, deletion, and update anomalies.
- **Tools:** Node.js, Express.js, MySQL, React.js