

AMY ZHU

Computer science, BSc. | year 4
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Technical Skills

- ✧ *Languages:* **Java, Racket, TypeScript/JavaScript, Scala, Go**
- ✧ *Environments:* **Linux, JetBrains IDEs, VSCode**
- ✧ *Graphics:* **Adobe Photoshop, InDesign, Illustrator**
- ✧ *Other:* **LaTeX, Git, Jira, Crucible**

Technical Projects

Birder (Pidgin-to-CamQuery transpiler) 05 - 08/2019

- ✧ Constructed a two-pass translation engine for queries on provenance graphs from the declarative DSL Pidgin (PLDI '15) to imperative functions in C.
- ✧ Produced an ACM-formatted short paper contextualizing the project, establishing supplementary background details, and outlining key technical aspects.

amy.zhucchini.ca 10/2017

- ✧ Developed a personalized static website from hand using JavaScript and Bootstrap.

Research Experience

Immutable Extensions for Synthetic Separation Logic 05-2019 - present

- ✧ Investigating the utility of immutable connectors in program synthesis driven by separation logic specifications under Prof. Ilya Sergey at Yale-NUS.
- ✧ Implement immutable heaplets with parameterized predicates (De Bruijn indices) and reasoning for permissions to make for more productive proof search and improve the intuitiveness of synthesized programs.
- ✧ Aiming to submit for publication in September.

Distributed Mutation Testing 05 - 12/2018

- ✧ Developed a framework for distributed mutation testing, reasoning about adapting fundamental aspects of distributed systems under Prof. Ivan Beschastnikh.

Work Experience

Fusemail - Software Engineering Co-Op 09/2017 - 04/2018

- ✧ Collaborated with team members for timely completion of projects. Resolved tickets by systematically writing clean, organized, maintainable Java code, and fixed production bugs by deeply investigating systems.
- ✧ Developed, documented, and tested solutions within existing systems.
- ✧ Ensured code standards and iterated over code by participating in code reviews.
- ✧ Worked with microservices, REST APIs, MariaDB and SQL, build pipelines.

UBC Extended Learning – Undergraduate Academic Assistant 05/2017 – present

- ✧ Developed code examples in TypeScript, Java, and BSL; Creates assignments and other content to be used in a 6-part software engineering MOOC.
- ✧ Contributes to learner understanding by actively answering forum questions.
- ✧ Provides meaningful feedback on code correctness and quality for assignment submissions in TypeScript, Java, BSL for hundreds of students.

UBC Computer Science – Teaching Assistant 09/2016 – 04/2017

- ✧ Interacted with students, other TAs, and professors to deliver a comprehensive learning experience for an introductory computer course.
- ✧ Lead 3-hour labs guiding students to understand problem solutions on their own.
- ✧ Graded exams in an intensive course of about 600 students.

Volunteer Experience

UBC Computer Science Student Society – President 05/2019 – present

- ✧ Oversees student society for over 2000 Computer Science undergraduate students.
- ✧ Orchestrates and enables peer-to-peer services in academic support, enriched social circles, and industry growth.
- ✧ Empowers students to create initiatives that matter to them through club resources.

UBC Computer Science Student Society – VP External 05/2018 – 05/2019

- ✧ Organized 52 companies and 2000+ students for the UBC Technical Career Fair.
- ✧ Coordinated between multiple parties to secure venue, furnishings, catering, smooth day-of-operations, and fulfilling experiences for employers and students.
- ✧ Overall feedback was very positive; event was well-organized and enjoyable.

Education and Awards

University of British Columbia 09/2015 – 05/2020 (expected)

- ☆ IKB Women in Technology Scholarship (2018)
- ☆ NSERC USRA (2018)
- ☆ Science Scholar (2016)
- ☆ Trek Excellence Award for Continuing Students (2016)
- ☆ J Fred Muir Memorial Scholarship in Science (2016)

Relevant coursework: Advanced Operating Systems, Operating Systems (grad course), Compiler Construction, Internet Computing, Geometric Modelling, Real Variables, Software Engineering

Interests

- ✧ Fluent in English, conversational Chinese and French.
- ✧ Mechanical keyboards, reading, writing, baking, sewing, knitting, weaving, whisky tasting, piano, cello, painting, sketching.