LILY BRYANT

labryant@cs.ubc.ca | cs.ubc.ca/~labryant

RESEARCH INTERESTS

Type-preserving compilation, compiler correctness, type theory, language semantics, automated theorem proving

EDUCATION

MSc, Computer Science, *University of British Columbia* – 92% GPA

Sep 2019 – Present | Vancouver, BC

- Thesis focus: *Type-preserving Compilation of Dependent Types*
  Supervised by Prof. William J. Bowman
- Selected coursework: *Compiler Theory, Programming Language Principles, Functional and Logic Programming*

BSc Hons. With Distinction, Computer Science, *University of Victoria* – 96% GPA

Sep 2014 – Aug 2019 | Victoria, BC

- Thesis: *Melody: A User-friendly Programming Language for Music Design and Audio Output*
  Supervised by Prof. Jason Corless
- Selected coursework: *Programming Languages, Operating Systems, Elementary Formal Logic, Theoretical Logic, Philosophy of Mathematics*

EXPERIENCE

Graduate Teaching/Research Assistant, *University of British Columbia*

Sep 2019 – Present | Vancouver, BC

- Introduction to Compiler Construction – *CPSC 411* Spring 2020, Summer 2020 (Course Dev.), Spring 2021
  Incremental implementation and extension of a compiler from Racket subset to x86 Assembly [Racket]
- Definition of Programming Languages – *CPSC 311* Fall 2019, Fall 2020
  Syntax and semantics, implementation of functional and OOP languages [Racket]

Academic Assistant, *University of Victoria*

May 2018 – Aug 2019 | Victoria, BC

- Foundations of Computer Science – *CSC 320* Fall 2018
  Computational complexity theory, automata theory, decidability [Theory]
- Algorithms and Data Structures I and II – *CSC 225, 226* Summer 2018, Spring + Summer 2019
  Intermediate algorithmic design and analysis, graph theory, advanced data structures [Java]
- Fundamentals of Programming I and II – *CSC 110, 115* Fall 2018, Spring + Summer 2019
  Introductory OOP and data structures [Python, Java]

Software Developer, Co-op, *Delta-X Research*

Apr 2018 – Aug 2018 | Victoria, BC

- Working in Python, assisted in development of market-leading, cloud-based web application providing management and analysis of test data for high-voltage electrical apparatus

SKILLS

- Strong Racket, Python, Java and experience with Haskell, C, SML, and AVR and x86 Assembly
- Excellent ability to combine both logical and creative thinking across multiple disciplines

AWARDS

BC Completion Grant – $1250	2017
Clara Evelyn Wilson Scholarship – $4000	2016/2017
Association of Professional Engineers of BC Bursary – $835	2016
University of Victoria Entrance Scholarship – $3000	2014
Numerous academic achievement awards grades 9-12 – $2000 total	2014