Andrew Blinn

me@andrewblinn.com • github.com/disconcision
Toronto / Canada • English + French (basic)

Passionate about programming languages as user interfaces & keeps current with PL/FP/UI research & development

---

Work @ TodaQ, Toronto

Software Development in Clojure • *May 2019 - Current*
Implementing a novel distributed digital asset management protocol & ancillary web services

Work @ University of Toronto

Software & Documentation Development • *Summer 2018*
Wrote code & exegesis for professor David Liu's programming language theory course
Designed & built an educational language with pattern matching & algebraic data types

Teaching assistance for Principles of Programming Languages (5 semesters) • *2017 – 2019*
Led tutorials, managed fora & coached with a focus on testing/TDD & code review
Built an algebraic code stepper to illustrate continuations in Scheme

---

School @ University of Toronto

H.B.Sc in Mathematics & Computer Science • *2014 - 2019*
Graduate-level coursework in abstract algebra, compilers, graphics & languages
Built a Racket-based x86/C com/transpiler for a λ-calculus-based language with macro system
Coursework in abstract algebra, algorithms, concurrency, differential geometry & topology

Research in Variational Data Structures with Marsha Chechik • *2018 - Current*
Built & profiled Haskell data structures supporting variational analysis of large software product lines
Designed & built SpyShare, a Graphviz-based tool to visually inspect data sharing

Research in Structured Editing in Racket with Gary Baumgartner • *Summer 2017*
Self-initiated study of extant refactoring, live programming, and direct manipulation tooling
Designed & began implementation of Fructure, a Racket-based polyglot structure editor

---

Personal Projects

Fructure is a prototype editor focused on composable refactoring, to be featured at RacketCon 2019
Containment Patterns extend Racket pattern matching to capture contexts within deeply-nested data structures
Depthmarch is an OpenMP-parallelized C++ raymarcher for constructive solid geometry

---

Technical Skills

Functional Programming - Type/Test-Driven-Development in Racket, Scheme, Clojure & Haskell
Property-based testing with QuickCheck. DSL development with Racket/Redex

UI & Graphics - CSS/HTML. Design mock-up in Adobe Photoshop/Illustrator/After-Effects
Raytracing, rasterization, kinematics & geometry processing in C++ & GLSL

Profiling & Parallelism/Concurrency - C, C++ with OpenMP & MPI. CUDA. core.async

Etc - LaTeX, Python, Java, Git, Bash, GNU/Emacs/Linux/Windows/MacOS

Conferences & Workshop Attendance

ICFP - International Conference on Functional Programming • *St.Louis, 2018*
Attended fully-funded on PLMW Scholarship

OPLSS - Oregon Programming Languages Summer School • *Eugene, 2018*
A three-week program of lectures, workshops & rock-climbing with leading PL researchers

Etc - Clojure North 2019, Strange Loop 2018 , RacketCon 2018 • *2018 - 2019*

Outside interests - Bouldering, running, camping, taking pictures, & bike-commuting year-round

---