L Denney

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Education

McGill University May 2026
Bachelor of Arts, Major in Computer Science, Minor in Japanese Language Montreal, QC

- GPA: 3.8
- Relevant Coursework: Data Structures and Algorithms, Operating Systems, Compiler Design, Functional and Logical Programming, Programming Language Theory

Experience

Research Assistant - Computation and Logic Group Sept 2025 – Present
McGill University Montreal, QC

- Mechanizing program equivalence for a linear functional language in Beluga by adapting existing mechanizations to enforce linearity constraints.

Teaching Assistant - COMP302: Programming Languages and Paradigms Jan 2025 – Present
McGill University Montreal, QC

- Designed and led six tutorial sessions for a 30-student class on functional programming and programming language theory in OCaml. Held weekly office hours to assist students with course content. Invigilated and graded midterms and finals.
- Course Content: Functional programming, programming language theory, type checking, parsing, and evaluation.

Teaching Assistant - COMP206: Introduction to Software Systems Sept – Dec 2024
McGill University Montreal, QC

- Guided students in debugging code and clarified course content in weekly office hours. Assisted with exam invigilation and grading.
- Course Content: Programming in C, shell scripting in Bash, debugging and testing of code, and version control with Git.

Projects

Howe's Method for Lazy Pairs

- Extended a proof that similarity is a pre-congruence for a call-by-name λ-calculus to lazy pairs and provided a mechanization in Beluga.

Call-by-Push-Value

- Defined operational and static semantics for a Call-By-Push-Value language. Implemented a type checker, evaluator and a transpiler from a Call-By-Name language in OCaml.

Crossword Player

- Built an interactive crossword puzzle player in JavaScript with HTML/CSS frontend along with an HTML form tool to convert puzzle solutions into JSON for the player program, enabling users to create and submit their own puzzles as well as solve 30+ puzzles through a web interface.

Skills

Programming Languages: Python, C, Java, OCaml, JavaScript, HTML/CSS, Beluga, Twelf, Lean
Tooling & DevOps: LaTeX, Shell Scripting, Bash, Git
Human Languages: English - Native, French - Conversational, Japanese - Conversational