

# ZHAOYI (AUGUST) GE

Waterloo, ON  
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## EDUCATION

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### University of Waterloo

September 2020 - May 2025

Bachelor of Computer Science (GPA: 91%)

Relevant Courses:

CS 245E - Logic and Computation (Enriched) - 100%

CS 241E - Foundations of Sequential Programs (Enriched) - 91%

PMATH 347 - Groups and Rings - 93%

## RESEARCH INTERESTS

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Programming Language Design / Type Systems / Functional Programming / Logic in Computer Science.

## PUBLICATIONS

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Cong Ma, **Zhaoyi Ge**, Edward Lee, Yizhou Zhang. **Lexical Effect Handlers, Directly**. *39th ACM International Conference on Object-Oriented Programming, Systems, Languages, and Applications*.

**Conditionally Accepted, OOPSLA 2024.**

## RESEARCH EXPERIENCE

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### Univeristy of Waterloo

September 2023 - December 2023, May 2024 - Present

*Undergraduate Research Fellow*

- Constructed a compiler for Lexi, a language supporting efficient lexical effect handlers. The compiler is written in OCaml and compiles Lexi into C.
- Constructed a compiler for STAL (Stack-based Typed Assembly Language) using OCaml and x86 Assembly, implemented a type checker for assembly instructions and stack operations.

## WORK EXPERIENCE

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### Genesys

May 2023 - August 2023

*Software Developer Intern*

*Markham, Ontario*

- Led the development of a security automation service in Python for cloud native applications.

### MeshAI

May 2022 - August 2022

*Software Developer Intern*

*Remote*

- Built healthcare services using Java and GraphQL. Improved response time by caching using Redis.

## PROJECTS

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### Proust

CS 245E Course Project

- Developed a simple interactive **proof assistant** for propositional and predicate logic using Racket.
- Proved theorems about natural numbers and Boolean algebra using the proof assistant.

### Lacs

CS 241E Course Project

- Implemented a **compiler** for a minimal Scala-like language using Scala.
- Developed features such as garbage collection, higher-order functions and closures.

## TECHNICAL SKILLS

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### Languages

OCaml, Coq, Scala, Agda, Racket, C++.

### Tools and Technologies

Git, Docker, x86 Assembly.