

# Ariel Weiss

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🌐 <https://github.com/aatxe>

☎ (650) 660-4815

## Work Experience

### Senior Software Engineer at Roblox 2022-Present

- Leading the design and implementation of Luau's type inference system and developer tooling in C++ and Luau.
- Managing and mentoring 3 junior engineers and 2 interns in support of their growth and development.
- Serving as a community ambassador and developer advocate for the Luau team in the Roblox community.

### Research Associate at SILC Lab 2017-2022

- Headed the Oxide project, a formal semantics of the Rust programming language, which won the POPL SRC.
- Implemented an Oxide compiler and tested its compatibility with Rust on over 200 real-world tests.

### Research Assistant at PLASMA Lab 2015-2017

- Created and led the Tortoise project in Scala to automatically repair system configurations via the shell.
- Developed static analysis tools for formally verifying the correctness of system configurations in Puppet.

### Software Engineer at ProtoIPO, Inc. 2014-2015

- Spearheaded development of a module-based middleware system using C# for a custom CMS.
- Designed and implemented user-customizable investment portals for 3 clients using our CMS.

## Open Source Projects

🌱 [luau-lang/luau](#) ★ 4716 since 2022  
Language: C++ 102 commits, 208,179 ++, 107,170 -

🌱 [aatxe/irc](#) ★ 561 since 2014  
Language: Rust 674 commits, 35,416 ++, 27,213 -

🌱 [aatxe/oxide](#) ★ 127 2017-2022  
Languages: OCaml, Rust 708 commits, 54,566 ++, 53,293 -

🌱 [plasma-umass/Tortoise](#) 2017  
Language: Scala 227 commits, 8,891 ++, 9,571 -

🌱 [plasma-umass/Rehearsal](#) 2016  
Language: Scala squashed history, 12,464 ++, 4,260 -

## Professional Skills

**Programming Languages:** Rust, OCaml, C++, Haskell, Scala, Python, C#, Java, JavaScript, HTML, CSS, x86/x64 Assembly

**Tools:** git, GitHub, TeamCity, Emacs, Slack, Discord, lldb, Homebrew, fish, cargo, dune, sbt, buck2, CMake, Make, gdb

## Publications

**Oxide: The Essence of Rust** arXiv 2022  
Ariel Weiss, Olek Gierczak, Daniel Patterson, Nicholas D. Matsakis, Amal Ahmed

**Tortoise:** ASE 2017  
*Interactive System Configuration Repair*  
Ariel Weiss, Arjun Guha, Yuriy Brun

**Rehearsal:** PLDI 2016  
*A Configuration Verification Tool for Puppet*  
Rian Shambaugh, Ariel Weiss, Arjun Guha

## Education

**Northeastern University** 2022  
Master of Science in Computer Science

**University of Massachusetts, Amherst** 2017  
Bachelor of Science in Computer Science  
Summa Cum Laude

## Volunteer Experience

**Hiring Committee at Northeastern** 2018-2019  
• Served as sole PhD representative on the faculty hiring committee for Khoury College.  
• Organized student meetings with over 30 candidates in all areas of computing.

**Organizer at SCTF** 2015-2017  
• Supported the development of a seasonal security competition with 3,000 participants.

**Founder at HSCTF** 2014  
• Founded and organized an online computer security competition with over 2,700 participants in its inaugural year.

## Awards

**POPL Student Research Competition** 🏆 2019

**Northeastern University Fellowship** 2017

**NSF Graduate Research Fellowship** 2017

**Outstanding Undergrad. Course Assistant** 2017

**PLDI Distinguished Artifact Award** 2016