

Ariel Weiss

✉ aweiss@hey.com

🌐 <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