

ALEXANDER VARGA

Computer Science Master's Student

www.asvarga.com

alexander_varga@brown.edu



PROGRAMMING LANGUAGES

Proficient With

Python, C++, Java, Javascript, Haskell,
Racket, Matlab, Alloy, PHP, Mathematica

Experienced With

OCaml, GLSL, Agda, Swift, Pony, C, C#,
Objective-C, Assembly, Coq, Julia

TOOLS + PLATFORMS

Git, Unix, Docker, OpenGL, Node.js,
Postgres, Drupal, Angular, iOS, Web

PROJECTS

Please visit www.asvarga.com for links to some of my projects, including:

- GPU Fireworks: Graphics course project with thousands of particles and real-time lighting (C++ and GLSL)
- Graphical Proof Assistant: Tool for experimenting with type theories and proofs (Javascript and React)
- Verified Ordinal Arithmetic: A formally verified implementation of ordinal arithmetic (Liquid Haskell)
- The computational art featured above

CONTACT + PROFILES

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github.com/asvarga
stackoverflow.com/users/1684606

EDUCATION

Brown University - Providence RI

MS in Computer Science | Class of 2020

- Focusing on Formal Methods and Applied Logic for Systems.
- Master's Research Project: Using the Racket programming language to develop a programming language for model checking.
- Current Courses: "Compilers and Program Analysis", "Software Security and Exploitation".

Universitat de Barcelona - Barcelona, Spain

Graduate Coursework in Pure and Applied Logic

- Studied Mathematical Logic with emphasis on applications to Computer Science.
- Selected Courses: "Computability", "Mathematical Logic", "Modal Logic"

Brown University - Providence RI

BS in Computer Science | Class of 2017

- Capstone Project: Wrote an abstract algebra module for the Alloy model checker.
- Selected Courses: "Introduction to Software Engineering", "Computer Vision", "Introduction to Machine Learning", "Theory of Computation", "Design and Implementation of Programming Languages", "Logic for Systems".

PROFESSIONAL EXPERIENCE

Rekener Inc. - Boston MA

Web and Growth Engineer | June 2017 - July 2018

- Reported directly to CTO and CMO at 12-person startup.
- Developed features for the SaaS Angular web app.
- Wrote scripts to scrape and analyze websites to generate sales leads.
- Created and maintained the company's Drupal website, single handedly.
- Migrated website to AWS using Docker.
- Participated in weekly marketing strategy and SEO meetings.
- Worked with Node.js and PHP.

Quantlab Financial, LLC - Boston MA

Research Intern | Summer 2015

- Worked with a team to develop a domain-specific language and compiler for describing and handling data from financial markets for high-frequency trading.
- Worked with C++.

Facebook, Inc. - Menlo Park CA

Software Engineering Intern | Summer 2014

- Created a backend diagnostics tool that when given a search query and document identifier would trace how the document was scored, ranked, and filtered. The tool was successfully used to understand why certain documents that were expected to appear in the search results failed to show up.
- Worked with C++ and PHP.

Speak Your Mind Foundation - Providence RI

Summer Intern | Summer 2013

- Developed applications and novel user interfaces to help people with neurological injuries or diseases to communicate.
- Worked with Java and Processing.