Boston, MA
(978) 914-4097

Nicholas Zuber

https://nickzuber.com

https://github.com/nickzuber
zuber.nicholas@gmail.com

EXPERIENCE

Robin Boston, MA
Senior Software Engineer *April 2020 – Present*

- Lead the engineering efforts for building an interactive editor tool designed for creating office maps.
- Design and invent geospatial algorithms for solving various challenges in our maps product.
- Improve the performance of our maps platform such that larger customers experience up to 10x quicker interactions, and load times up to 3x faster.

Robin Boston, MA
Software Engineer *June 2018 – April 2020*

- Architect and develop the internal data visualization library used across every team in the company.
- Design probabilistic models for building out the company's suggestion generation infrastructure.
- Assist in designing and implementing new suggestion based features for 25,000+ users to increase and maximize productivity and usability.

Box Redwood City, CA
Software Engineering Intern *June 2017 – Aug. 2017*

- Helped maintain and develop features for ClusterRunner, a tool which optimizes test suites for over 100,000 tests internally, is used 1,000+ times each day, and speeds up test feedback by 300x.
- Implemented a caching layer for testing results and build artifacts, using SQLite and an ORM for added flexibility in database integrations.
- Refactored REST API to be able to support breaking changes and preserve backwards compatibility.

OPEN SOURCE PROJECTS

Infrared *(type system)* *July 2018 – Present*

- Designing a fluid type system for JavaScript that optimistically finds potential type errors and type inconsistencies completely through inference and advanced type reduction.
- Capitalizing on practical heuristics to better predict developers' intent and correct common mistakes.
- Creating novel algorithms and data structures to solve interesting efficiency related problems using graph theory.

Kelp *(compiler)* *Jan. 2018 – May 2018*

- Engineered a compiler from scratch using OCaml to transform a JavaScript-like language, with features like functions and closures, to optimized x86-64 assembly code.
- Developed an efficient and conservative register allocation strategy using graph coloring and saturation algorithms to increase execution speed by minimizing stack allocations.
- Wrote an automated garbage collection runtime in C to support dynamic heap allocation.

SKILLS

Programming Languages & Frameworks

Proficient in:	JavaScript, OCaml, React, React Native, Python
Experienced with:	C, Racket, SQL, PHP, Java, C++

EDUCATION

University of Massachusetts Lowell *Spring 2018*
Bachelor of Science in Computer Science, Minor in Mathematics *Major GPA: 3.56*

Relevant Courses:	Machine Learning, Compiler Theory, Operating Systems, Statistics
Honors:	Deans List, UMass Amherst Book Award for Computer Science
Hackathons:	HackHarvard, CODEX MIT Media Lab, Hackbeanpot, Hawkathon