Edward Minnix III

Programming Language Tinkerer · Software Developer

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Objective

Seeking a position working on the implementation of a compiler, interpreter, or tooling to verify the correctness and safety of software.

Education

2019 – 2021 **M.S. Computer Science**, *Stevens Institute of Technology*, Hoboken, NJ.

2016 – 2020 **B.S. Computer Science**, *Stevens Institute of Technology*, Hoboken, NJ.

- GPA – 3.79, Dean's List since Fall 2016.
- Member of Upsilon Pi Epsilon: International Honor Society for the Computing and Information Disciplines

Work Experience

5/2018 – 8/2018
5/2019 – 8/2019 **Software Development Intern**, *Unisys*, Blue Bell, PA.

- Assisted in developing a chatbot to automate common IT helpdesk tasks.
- Worked on a telemetry system for virtual machines to send system information to monitoring servers.
- Developed a tool for parsing changelogs written as Markdown files and converting them to JSON objects in order to generate release notes.
- Used Agile practices, such as regular Scrum meetings and used Visual Studio Team Services to track tasks, features, bugs and releases.
- Practiced Test Driven Devlopment by using tests to verify correctness and writing tests before code.

1/2019 – 5/2019 **Teaching Assistant, *Programming Languages***, *Stevens Institute of Technology*, Hoboken, NJ.

- Assisted in teaching students about the fundamentals of implementing a programming language, such as the lambda calculus, interpreters, manipulating abstract syntax trees, and typing rules.
- Aided students in implementing several interpreters and a type checker in OCaml.
- Helped the professor in developing assignments to teach different aspects of the language, as well as extend existing components such as lexer and parser.

8/2018 – 12/2018 **Teaching Assistant, *Automata & Computation***, *Stevens Institute of Technology*, Hoboken, NJ.

- Aided in teaching students about important theoretical computer science concepts, such as finite state machines, grammars, and computational complexity.
- Held weekly office hours and periodic reviews.
- Graded and designed assignments.

Relevant Course Work

Spring 2019 **Formal Modeling & Analysis**, *Stevens Institute of Technology*, Hoboken, NJ.

- Learned how to use abstractions to design and formally verify software.
- Used verification tools and languages such as Alloy, Dafny, and Proverif.
- Formally verified several algorithms using Liquid Haskell, an extension to Haskell which uses refinement types to place constraints on values to use the type system as a means of verification.

Spring 2018 **Type Systems for Programming Languages**, *Stevens Institute of Technology*, Hoboken, NJ.

- Learned the core concepts of designing and implementing a type system.
- Implemented a type inference engine from scratch.
- Researched novel concepts from F#'s type system for final project and presentation.

Skills

Languages Python, OCaml, C++, C#, Haskell, C, Erlang, F#, Clojure, Common Lisp, Emacs Lisp

Verification Tools Alloy, Liquid Haskell, Dafny