

Reed Oei

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Education

University of Illinois at Urbana-Champaign

BS in Computer Science (Expected May 2021)

GPA: 3.90/4.00

Coursework

Programming Languages and Compilers, Intro. to Algorithms and Models of Computation, Data Structures, Software Design Studio, Computer Architecture, System Programming, Abstract Linear Algebra, Probability Theory, Abstract Linear Algebra, Set Theory and Topology, Discrete Structures

Work Experience

Research Assistant, Illinois Geometry Lab January 2019-Present

Studying the theory of automata and its relationship to computability problems.

Using the automated theorem prover Walnut to formalize and prove theorems about automata.

Course Staff, Software Design Studio January 2019-Present

Held code reviews and office hours to provide feedback on student code.

Evaluated student written code for style and a number of software quality metrics.

Research Assistant at UIUC September 2017-February 2019

Developed tools to automatically fix and debug flaky tests.

Evaluated open source projects to detect and classify flaky tests in them.

Fixed dependent tests in open source projects.

Studied feasibility of generating tests from bug reports.

Easy Access May-August 2017

Created a suite of reports to analyze company data for the purpose of improving efficiency.

Developed new features for websites using C#, ASP.NET, and SQL Server.

Tested contributions made by other team members.

Publications

Wing Lam, Reed Oei, August Shi, Darko Marinov, Tao Xie. "iDFlakies: A Framework for Detecting and Partially Classifying Flaky Tests", IEEE International Conference on Software Testing, Verification and Validation (ICST), Xi'an, China, April 2019.

Personal Projects

CMips <https://github.com/ReedOei/CMips>

An optimizing C and Lisp compiler that compiles to MIPS assembly, written in Haskell.

Weather Service Comparison <https://github.com/ReedOei/Weather-Service-Comparison>

Program gathers data from a variety of weather websites and stores the data in a MySQL server.

MySQL server analyzes gathered data to determine how accurate each of the websites' predictions is.

Rudi <https://github.com/ReedOei/Rudi>

Programming language that compiles to the SKI combinator calculus.

Organizations

ACM@UIUC SIGPLAN September 2017-Present

Leading workshops teaching basic Haskell and functional programming.

Skills

Languages

Proficient: Java, Haskell, Python, Prolog, C#, SQL

Familiar: Bash, Idris, F#, LaTeX, C, C++, Javascript

Programs/Platforms

Git, Maven, SVN, Mercurial, Gradle