Jacob Salzberg

Undergraduate Researcher and Teaching Assistant

3009 ME Valentine Dr.
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EXPERIENCE AND PROJECTS

North Carolina State University — *Independent Researcher*

January 2020 - PRESENT

Advised by Dr. Jamie Jennings, I developed and unit-tested a compiler and interpreter for Finite State Machines (FSMs), and designed a mapping from the linear-time subset of *Rosie* to FSMs as part of the **PEGREG** project. I developed **Lua**, **C**, **Scrum**, **CI**, and **Research** skills.

Website: https://github.com/jsalzbergedu/pegreg

Introductory Java, Introduction to Computing Environments — *Teaching Assistant*

January 2020 - July 2020

Instructors: Dr. Suzanne Balik, Mr. Chris Brown and Ms. Toni-Ann Marini

Discovery of Silent Vulnerability Fixes — *Independent Researcher*

September 2019 - January 2020

Advised by Dr. William Enck, I researched methodologies for finding *silent vulnerability fixes* and developed *flawfinder_diff.* I learned **Python**, **SQL**, and **Research** skills.

Linting for Exponential Time Patterns in Rosie — *Independent Researcher*

June 2019 - August 2019

Advised by Dr. Jamie Jennings, I developed a lint library for *Rosie* and a program that uses Dijkstra's strongly connected component algorithm to find a class of expressions that cannot match input text. I learned **Lua** and **Algorithm Design.**

Website: https://gitlab.com/rosie-pattern-language/rosie/-/tree/lint1

EDUCATION

North Carolina State University, Raleigh — *BSc in CS*

August 2017 - May 2021

4.0 Major and Cumulative GPA. Minor in French.

SKILLS

Programming, Algorithm Design, Continuous Integration, Teamwork, Planning, and Communication

FRAMEWORKS AND TOOLS

Hibernate, AngularJS, Spring, Cucumber, Jenkins, Travis, Coveralls, Git and Github

AWARDS

NCSU Engineering Research Experience for Undergraduates
Summer 2019, Fall 2019, Summer 2020

Semester Dean's List
2017–Present When Eligible

LANGUAGES

Java, C, C++, JavaScript, Lua, GLSL, SQL, CSS, Rust, Lisp, Assembler, HTML, Cucumber

LINKS
Github
https://github.com/jsalzbergedu

Website
https://jsalzbergedu.github.io