

# Sam FLATTERY

## Software Engineer

@ samflattery@gmail.com 412-419-4127

github.com/samflattery linkedin.com/in/samflattery123

## EDUCATION

### CARNEGIE MELLON UNIVERSITY

MAY 2022

#### Bachelor of Science in Computer Science

- > Concentration in Computer Systems
- > GPA : 3.84 / 4.00
- > Dean's List : Fall 18, Spring 19

## PERSONAL PROJECTS

### PROGRAMMING LANGUAGE : SUDOCODE

DEC 2019 - JAN 2020

- > Designed and implemented a programming language called sudoCode
- > Researched and learned about grammars, language specifications and parsing theory
- > Learned C++ in order to leverage OOP principles to create a modular code base
- > Created a tool to visualize the graphs that are created as the input code is interpreted
- > Wrote a lexer, parse tree and abstract syntax tree generator from scratch

C++ Make Graphviz Git

### iOS APP : FCE++

MAY - AUG 2019

- > Created an iOS app on which students can view CMU's course information and ask questions on courses
- > Learned Swift and iOS development from scratch
- > Utilized the Parse Platform API and HTTP requests to manage a server-side database
- > Compiled data from CMU's CSV of course data to JSON format using Python's Pandas, CSV and JSON modules

Swift Xcode Dev Tools Python HTTP Web APIs Git

## COURSEWORK

15-213 - Introduction to Computer Systems

15-251 - Great Ideas in Theoretical Computer Science

15-414 - Bug Catching : Automated Program Verification (current)

15-210 - Parallel and Sequential Data Structures and Algorithms (current)

15-330 - Introduction to Computer Security (current)

## SKILLS

**Programming Languages** C, Python, C++, Swift, SML, x86-64 Assembly

**Development Tools** Git, Vim, Xcode, Make, Tmux

**Operating Systems** macOS, Linux, Windows

**Other languages** Irish, French

## EXTRACURRICULARS

### THE ATLAS PROJECT | SOFTWARE LEAD

AUG 2019 - NOW

- > Managing the software team developing a fully autonomous gravity-powered vehicle
- > Present weekly briefings on software progress to the organization and assign tasks to team members
- > Created a ROS module to parse data received via serial connection from the sensors and publish it to the on-board computer for processing
- > Researching ways to incorporate machine learning into the vehicle's control mechanism

### INTERNATIONAL BASKETBALL

2017

- > Selected to play on the Irish International Basketball Team