Sam FLATTERY

Software Engineer

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🎓 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 DEVELOPER   AUG 2019 - NOW
- Working on developing an autonomous, gravity-powered vehicle
- 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