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 - NOW
> Designing and implementing 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
> Integrated semantic segmentation into the vehicle's control mechanism

INTERNATIONAL BASKETBALL — 2017
> Selected to play on the Irish International Basketball Team