Cathal O'Callaghan

2nd Year Computer Science & Information Technology Student

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Personal Projects

News article web scraper
Python / Go

Wrote a scraper to gather news articles from a handful of websites daily for later data analysis. I plan on using this data set as an intro to NLP and some basic machine learning. Refactored the script into Go which improved runtime from 12 to an average of 2 seconds.

Studyclix user base analysis
Python

Collected my own data set of all users on studyclix.ie. With this I compared the average student to the average student on studyclix and gave some insight into what type of person the average studyclix user is.

Database parser
C

A program to parse the an open data set of all airports and aerodomes worldwide. Each data point holds information such as coordinates, timezone and ICAO. I took on this project after my first year of C as a means of strengthening my knowledge of dynamic allocation and general knowledge of the language.

QR code anywhere chrome extension
Javascript

Developed a chrome extension to easily swap between desktop and mobile internet browsing by displaying a QR code for any webpage that can be easily scanned with a mobile device. I often use it to save time typing out very long and obscure URLs when I wish to swap browsing from my desktop to my phone.

Using an OCR to cheat memory tests
Python

Combined Google's Tesseract OCR and python for a script capable of insanely high scores on an online verbal memory test mini-game. My average score is 12 but with this script any score is obtainable if you're willing to the average of 0.5 seconds per level.

Achievements

Interview candidate for Google 2020 STEP internship

Based on my performance at a Google algorithms workshop event I was offered an interview for their summer STEP internship. This internship is for 1st and 2nd year students pursuing a technical degree.

Volunteering

NUIG Compsoc
Ordinary committee member

I'm on the committee for the 2019/2020 NUIG Computer society. I help out with committee work and am learning a bit about the operation and maintenance of our servers on the side.

NUIG Drone society
Safety Officer

I am the 2019/2020 safety officer for the NUIG drone society. I help with the running of our events and am tasked with the safety of our members.

References

References available upon request

Summary

A motivated and diligent individual with a keen interest in the ever-expanding world of technology. Love the rewards that programming offers and it's never-ending challenges that is has to offer. Focused on applying my programming knowledge to convert abstract, real world problems into programming based solutions.

Education

BSc Computer Science and Information Technology
NUI Galway

09/2018 - Ongoing   Graduating in 2022.

Favorite Modules

Algorithms & Information Systems - Discrete Mathematics
C Programming - Software Engineering
Object Orientated Programming - Web Development
Database Systems

Publications

Tesseract & Python OCR Guide

Wrote a wiki post for NUIG's Compsoc wiki page that taught beginners how to recreate my own project step by step.
https://bit.ly/37ogKsN

Language Experience

100% is my most well known language

Python

C

Javascript

Java

Go

Interests

Music
I am an avid techno fan. In my free time when I'm not listening to it I like practice my skills on my DJ controller with which I occasionally upload my sets to my personal mixcloud.

Drones
Have built two custom quadcopters since I gained interest in the hobby and love everything that comes with the constant maintenance and flying of drones. I have learned more than I could've imagined from the electronics work that I've had to do after many crashes.