



Peter Murphy



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WORK EXPERIENCE

Data Engineering Intern 06/2021 - 08/2021
Credit Karma Alexandria, VA

- Contributed to an Audience Forecasting service to help story and notification authors view estimated audience reach for the Recommendation System within the Data Engineering Division
- Improved observability and diagnostics within the service
- Helped other developers and notifications authors troubleshoot issues within the service

Coach Lead 04/2020 - 10/2020
Major League Hacking North America

- Hosted 1:1 calls with other Coaches to strengthen MLH's internal support network, strategize for future endeavors, and answer questions about the goings on within MLH

Part-time Software Engineer 06/2019 - 01/2021
Decipher Technology Studios Alexandria, VA

- Contributed to an AutoEncoder-based Log Anomaly Detection service control system
- Contributed to the GreyMatter backend control-plane features, extending Envoy's service mesh API
- Researched reinforcement learning techniques for the Grey Matter Sense team, developing methods of policy stabilization and sequence to sequence encoding

Policy Intern 06/2020 - 08/2020
DCLRS Washington, D.C.

- Attended Congressional hearings and virtual conferences to report on agricultural, business, and healthcare interests
- Wrote memos highlighting research findings and legislative efforts pertaining to clients' interests
- Redesigned the firm's biographical brochure

EDUCATION

B.S. in Computer Science
Virginia Tech, College of Engineering Dec. 2021
Philosophy, Politics, and Economics Minor

Coach 12/2018 - present
Major League Hacking Global 

- Empower hackers to create technical solutions via mentorship on topics ranging from general debugging to higher-level application development
- Provide preliminary and on-site assistance to organizers by communicating my experience and advice regarding team leadership, resource management, increasing community engagement, and incident resolution
- Demonstrate MLH's standard of excellence at events hosting 200 - 1,500 participants whether that means #TakingOutTheTrash or resolving conflicts
- Promote inclusivity by engaging participants of all skill levels
- Represent MLH's partners' brands by providing tips about their services including: Capital One, Google Cloud, GitHub

LEADERSHIP

VTHacks 2019 - present
Director, Co-Director

Helped plan and execute Virginia Tech's 6-9th annual hackathons

Virginia Tech Honor System 2018 - present
Student Panel Member

Participate in student-run hearings for honor violations

Coding Club 2015 - 2018
Founder, President, Team Captain

Planned, fundraised for, and co-directed Bishop Ireton's first hackathon

Bishop Ireton Honor Council 2017 - 2018
Executive Chairman, Vice Chairman

Oversaw all hearings for students reported for honor violations

Boy Scouts, Troop 680 2015 - 2016
Senior Patrol Leader

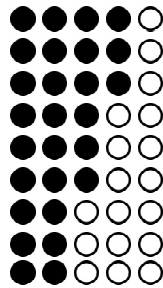
Planned and led meetings for troop of 50 scouts for one year

SKILLS

Tech Stack

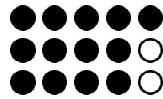
Java
Linux (Bash)
Python, pandas, Selenium, PyTorch
C
JavaScript, HTML & CSS
AWS, Google Cloud, k8s, Docker, Helm
Scala
Go
React

experience / proficiency



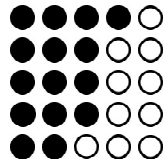
Non-Tech Stack

Planning, Organization
Writing
Public speaking



Graphic Design

Adobe Photoshop
Blender
Adobe InDesign
Adobe Illustrator
Adobe Premiere



PROJECTS

PyTorch Basics

01/2020

- A sandbox repository for implementing state of the art Reinforcement Learning algorithms
- This repo was stood-up with the help of some colleagues and is intended to be as straightforward as possible with respect to the tools and algorithms used by the Decipher Sense team

5-4 Podcast Website

08/2020

- Designed and maintain the website for the 5-4 podcast
- Wrote a Python script to automate page generation for individual episodes with their respective transcripts

Personal Website

02/2020

- Built a portfolio website showcasing projects, designs, and events I am involved in using the gatsby.js framework

AECOM Call Tracker

- Built a webscraping utility website used at an AECOM hurricane relief call center in Ponce, Puerto Rico
- The application uses Python, Flask, and Selenium to pull records for a given time range from a 3rd party website and displays them on a web page deployed to an EC2 instance for easy analysis of the call center's productivity that day

DCLRS Brochure

07/2020

- Used Adobe InDesign to redesign the biographical brochure describing the executive staff of DCLRS as well as the firm's services and customer success stories

Grey Matter Installation

07/2019

- A Katacoda scenario documenting the (deprecated) installation process for Grey Matter
- The scenario guides the user through the process of setting up a Kubernetes cluster, installing Hxelm and some associated dependencies, as well as Grey Matter itself

Calligula's Compendium

07/2020

- A Discord bot that serves as an interface for a collection of Dungeons & Dragons APIs and manually curated datasets about various skills, classes, spells, items, etc. to streamline digital play
- Built with Discord.py along with some of my friends

CS-3654 Final Project

12/2020

- Worked with a partner to develop a data visualization project exploring trends in 40 years of global suicide data across the axes of country, age, generation, and GDP
- We used BeautifulSoup, pandas, sklearn, and matplotlib to webscrape Wikipedia to build a database of historical events used for naive sentiment analysis which was plotted against countries' death rates to test our hypotheses

CS-3214 Thread Pool

10/2020

- Wrote a workstealing fork-join threadpool in C which implements futures and thread completion tracking

CS-3214 HTTP Server

12/2020

- Wrote a personal HTTP/1.1 server in C which supports IPv4 and IPv6, JWT validation and authentication, IDOR blocking, and concurrent connections via multithreading
- Deployed personal server to and AWS EC2 instance

Python MIPS32 Assembler

08/2021

- An assembler written in Python which, given valid .asm code, generates the corresponding machine code
- Adapted from an assignment for CS-2506
- Supports over 20 instructions

HONORS & AWARDS

Eagle Scout

07/2015

Boy Scouts of America

Earned the Bronze, Gold, and Silver Palms in addition to the highest rank of Eagle

Valedictorian

06/2018

Bishop Ireton Class of 2020

MLH 2020 Top 50 Hacker

02/2020

Major League Hacking

Selected from over 100,000 global hackers to share my story for Major League Hacking's Top 50 Hackers of 2020 list