

Sander Schulhoff

sanderschulhoff@gmail.com | trigaten.github.io | 410-805-2290

EDUCATION

University of Maryland, College Park

Bachelor of Science in Computer Science

Fall 2020 - Present

GPA: 3.753

RESEARCH

Stabilizing Hostilities through Arbitration and Diplomatic Engagement

Spring 2022 - Present

University of Maryland, Professor Jordan Boyd-Graber

- Working on a DARPA funded multi-university project with the goal of building bots to play the boardgame [Diplomacy](#) and talk to players.
- Currently building simple bots with hardcoded policies.

Andreou Lab Internship

Summer 2021 - Fall 2021

Johns Hopkins University, Professor Andreas G. Andreou

- Built [data pipelines](#) to record data from Arduino chips and RealSense cameras and send it to Microsoft [\Psi](#)
- Implemented a CNN+GRU model from scratch with Pytorch for video classification on event camera data

CLIP Undergraduate Research

Fall 2020 – Summer 2021

University of Maryland, Professor Jordan Boyd-Graber

College Park, MD

- Worked on [Diplomacy](#) boardgame NLP project developing a Discord bot used to collect player data and display machine learning predictions
- Bot passed live Alpha and Beta tests with paid participants
- Developed a [simple full-stack website](#) to collect data for a NLP analogy project
- Built an [annotation workflow](#) for the UMD [QANTA](#) project

Neurodata Lab Internship

Summer 2019

Johns Hopkins University, Professor Joshua Vogelstein

Baltimore, MD

- Wrote unit tests for a project converting clustering algorithm libraries written in R to Python
- Wrote scripts to create presentational graphs of algorithm performance on data sets like Iris
- Performed investigations on different clustering metrics where ground truth is known based on the Zachary's Karate Club social network graph dataset

WORK EXPERIENCE

Farama Foundation | *Python, Jekyll, Liquid, HTML, CSS*

Spring 2022 – Present

- Made a number of [small fixes](#) to [Gym](#)
- Built and refactored [fantasia Jekyll theme](#) from [PettingZoo website](#)
- Created new [Gym website](#): organized documentation PRs and wrote scripts to generate pages, menus, and gifs
- Currently redoing [PettingZoo website](#)

Teacher at Friends School of Baltimore | *HTML, CSS*

Fall 2021 – Present

- Co-teach an introductory web development/design course

Axidraw Control Software | *HTML, CSS, Javascript, Python*

Spring 2020

- Hired to build a Mac application for automating the process of writing physical notes
- Wrote frontend (Bootstrap) and backend (Python+pyaxidraw) to allow users to send tasks to be written by an [Axidraw](#)

SELECTED PROJECTS

Websites | *HTML, CSS, Javascript, Bootstrap, Jekyll, MaterializeCSS*

2021

- Built my [personal website](#) and [Denis Peskov's website](#) from scratch with Jekyll and Bootstrap
- Built [Teacher Recommender System Website](#) from scratch with MaterializeCSS
- Working on [candidate Augustin Saah's website](#) (adapted from a Jekyll format) and [PsiWars site](#) (Jekyll+Bootstrap) from scratch

Teacher Recommender System | *Google Apps Scripts, HTML, MaterializeCSS*

Spring 2019 – Present

- Developed suite of scripts to automate the process of matching students with teachers who will write their college recommendation letters
- College counselors control the process from a menu with functions allowing them to create forms, send them, and run a simple scoring algorithm that generates assignments
- Students and teachers are served autogenerated Google Forms to collect their data
- Sold Alpha version and released Beta version as an official Google Sheet Add-On

Heart Heist App | *Swift, Objective-C*

Summer 2018

- Built a top down shooter app using XCode and deployed it on the Apple App Store
- Used Gravit Designer and Garage Band to make art and music

OPEN SOURCE CONTRIBUTIONS

MineRL (Minecraft Reinforcement Learning Library): Committed 1000+ lines of documentation, bug fixes, and feature additions, including a [tutorial](#) on custom environment building. Also [ported](#) (from Project Malmo) the ability to send chat messages in MineRL and wrote a [tutorial page](#) for it. This functionality allows significant speed ups for training agents.

AI Gym (Reinforcement Learning Library): Built [new website](#), helped organize various documentation additions, make some small codebase changes.

TECHNICAL SKILLS

Frequent Languages: Python, Google Apps Script, Java, Javascript, HTML, CSS, C

Frequent Developer Tools: Visual Studio Code, Git, Adobe XD, Photoshop, Google Drive Scripting Environment,

Natural Languages: English, Spanish

Infrequent Languages and Tools: PHP, MySQL, Bash, Objective-C, C++, C#, Eclipse, IntelliJ IDEA, Pycharm, MAMP, SQLPro, PHPMyAdmin, Platform IO, Visual Studio, Atom, Jupyter Notebook, Google Colab, XCode, Unity

ACHIEVEMENTS

Won UMBC Hackathon 2020 (Cipher-Tech-Solutions challenge) with [ForeTrackR](#), a novel application of Blockchain to Chain of Custody in digital forensics

Won True Bit design competition (UMBC Hackathon)

Paper on semantic segmentation accepted into Smoky Mountain Data Challenge ([paper](#))