ANDREW COOKE

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EDUCATION

Brown University, Providence, RI **June 2022**
Sc B. Computer Science **GPA (unweighted): 3.5/4.0**

- Relevant Coursework: Multivariable Calculus, Linear Algebra, Integrated Intro to Computer Science, Intro to Computer Systems, Discrete Structures/Probability, Computer Vision, Statistical Inference, Artificial Intelligence, Deep Learning, 2D Game Engines, Software Security and Exploitation, Computational Linguistics

SKILLS & INTERESTS

- Experience with Unity, Photoshop, Illustrator
- Proficient using SolidWorks, C++, Basic Machining, Matlab, Racket, Ocaml, HTML, CSS
- Expert in Java, C, Python, Scala, Github, 3D printing, Machine Learning

PROJECT EXPERIENCE

Fully Implemented 2D Game Engine **September 2020-December 2020**

- Over the course of one semester, designed and wrote code for a 2D game engine
- Designed the game engine with multiple features, such as collision detection, realistic physics, screens, viewports, gameworlds, AI, and game objects with a component-based system
- Used the engine to implement multiple games, including tic-tac-toe, a dungeon crawler, and a platformer

Proximal Policy Optimization (PPO) Model Implementation **November 2020-December 2020**

- In a group of 4, designed a simple 2D 'dungeon crawler' game with random generation and enemies
- Successfully implemented a PPO model tasked to play our game, able to learn optimal strategies for winning
- Devpost link: https://devpost.com/software/artificially-deep-learning-machines

Chess Position Recognition Program **April 2020-May 2020**

- In a group of 4, designed a program tasked with using a convolutional neural net to recognize a given chess position
- Could identify each chess piece with high accuracy

3D Printer (Prusa i3 model) & CNC Machine **April 2014-September 2016**

- Built a homemade 3D printer and CNC machine made of stepper motors, extruder/drill head, 3D printed parts, and an Arduino

WORK EXPERIENCE

Software Engineering intern at Onset Computer Company **July 2021 – August 2021**

- Worked for a company which builds devices to collect environment data used for agriculture, weather stations, etc.
- Part of a team tasked with implementing software to create and test a performance server environment
- Designed and implemented a program to emulate devices stored in a main database and upload data via RESTful web services

LEADERSHIP

St. Andrew's School STEM Camp, *Camp Leader* **July-August 2016-2021**

- Taught students ages 8-14 the basics of engineering through the building of LEGO and Tetrix robots as well as designing parts to be 3D printed
- Introduced a week-long curriculum focused on building circuits using Arduinos and breadboards
- Mentored another counselor in order to ensure the camp continues to operate

VARSITY ATHLETIC EXPERIENCE

Brown Men's Crew Team **September 2018-Present**

- Member of a team which trains for 20+ hours per week and races against the top teams in the country
- Raced as part of the team selected to travel to the IRA National Championships, placing 6th and 5th overall