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Matthew Mabrey

Portfolio Website: mattmabrey1.github.io

EDUCATION:

The College of New Jersey, Ewing NJ Anticipated Fall 2021, 4.0/4.0 GPA
Bachelors of Science, Computer Science

Rowan College at Burlington County, Mt. Laurel NJ Summer 2019, 3.93/4.0 GPA
Associates of Science, Computer Science

***Notable Coursework*:** Artificial Intelligence, Computer Networking, Operating Systems, Analysis of Algorithms, Game Design II, Object-oriented Programming & Data Abstraction, Discrete Structures, Fundamentals of Web Design, and Calculus II & Analytic Geometry

***Achievements*:** Dean's List, 2017-Present

Activities and Societies: Member of Mu Alpha Theta Mathematics Honor Society, TCNJ's Game Design Club, and Philanthropy Chair for Alpha Chi Rho National Collegiate Fraternity

SKILLS:

- **Strong with C++, C#, C, Java, and Python**
- **Firm grasp of most programming concepts**
- **Proficient with HTML, CSS, Javascript, SQL, and PHP to build and design websites**
- **Skilled with Microsoft Office Suite, Adobe Photoshop, and Unity Engine**

PROJECTS:

Demolition Derby Game — Independent Video Game, Summer 2019-Summer 2020

- 3D multiplayer video game created for fun using the Unity Engine. Over the course of the project I learned how to implement multiplayer using a networking framework and gained experience using Remote Procedure Calls, Events, and Object Synchronization across multiple clients.

Game Solving Agent — Artificial Intelligence Final Project, Spring 2020

- Tested several artificial intelligence techniques to design a rational game solving agent that successfully completes 10 stages of an arcade game by avoiding obstacles and adversaries, while attempting to maximize it's score by collecting targets as fast as possible.

Arduino RepairMan — Global Game Jam Team Project, Spring 2020

- Physical game created for the Global Game Jam 2020 48-hour game design hackathon using an Arduino and several I/O devices where the player must decipher the instructions to solve puzzles before the time runs out and it "blows up".

Kalman Filtering — Artificial Intelligence Extra Credit Project, Spring 2020

- Implemented Kalman Filtering, a common technique used for object tracking, to predict the actual water level of a water tank over time from noisy and inaccurate observations.

RESEARCH:

Device Security — Computer Science Undergraduate Research RCBC Fall 2018

- Researched security flaws in current mobile device technology personally focusing on comparing the malware and virus vulnerabilities of popular mobile operating systems and assessing the security options currently available to consumers.