

JUSTIN COCKRELL

justin.cockrell1@gmail.com ▪ justincockrell1.github.io ▪ www.linkedin.com/in/justincockrell1

EXPERIENCE

McConnell Air Force Base – Roboticist

Summer 2021 - Present | KS

Debugged the Python/C++ ROS packages for a self driving ATV that hadn't worked in a year and got it working again
Rewrote the ROS canopen networking node with Linux can sockets in C++
Created an optimized navigation system from scratch that would allow the robot to move via 2d coordinates

Java Minecraft Modding – Instructor

2017 - 2018 | KS

Taught Java programming through Minecraft modding to students aged 12-17
Added over 100 new blocks and items as well as new mobs with custom AI behavior

EDUCATION

Derby High School

Class of 2019

100 Days of Javascript Course on Udemy
C Programming Course on Udemy

SOFTWARE SKILLS

Proficient in: C++, JavaScript

Worked in: HTML5, CSS, Python, C#, Java, Unity, Node JS, Express, ROS, React

Interests: Game dev, Android dev, Web dev, Robotics

PROJECTS/HACKATHONS

Unity Game – Game Jam

Summer 2019 | KS

Created a 2d climbing platformer game in a 48 hour game jam using unity in a team of 4 people
Developed game features using C# including the ability for the player to swim and climb
Created C# structures to help manage player states and transfer data between classes

Multiplayer NodeJS Tank Game

2021 | KS

Built full stack browser game using NodeJs web sockets for multiplayer capabilities
Utilized asynchronous event handling to allow any number of players to join
Wrote Javascript code using trigonometry to calculate the tanks movement based on its angle

Chess Training Application

2020 | KS

Programmed a C++ application that quizzes you on openings to help memorize them
Created a dynamic chess trainer data structure that groups openings based on opponent

Augmented Reality

2016-2018 | KS

Created a C++ augmented reality chess program that used a webcam to identify a chess board
Wrote an algorithm in C++ to detect edges and correctly draw the pieces aligned to the board
Made a system to keep track of the vertices in order to orient the board properly from any angle

2D game engine

2020 | KS

Developed a 2d Game Engine as a C++ library that could be used to rapidly make games
Developed classes to handle physics such as gravity and collisions for rectangles and circles

LEADERSHIP/OTHER

Other

Placed 7th in the 2019 Kansas Scholastic State Blitz Chess Championship and 13th in Classical
Ranked 36th overall in the state for chess and 3x champion of the Wichita Chess Club
Rock climb sport routes up to 5.11 at the Kansas Cliff Club