Colin Schmierer

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EXPERIENCE

2023-
-Present **Software Developer at *CACI International Inc***
- Software Developer on MAST(Mission Avionics System Trainer) Team at CACI
- Decreased database download times by over 300%
- Currently working on Maintenance Trainer System (MTS) contract
- Designed and programmed software simulation of real aircraft hardware for in office testing
- *More to come*

2022 **Object Detection Research *[Python (TensorFlow & PyTorch)] [YOLO, CenterNet, FRCNN, MobileNet]***
- Worked under Professor Xiaoyi Lu with a team
- Investigated ways to increase accuracy of object detection when looking for tiny objects
- Our research paper was accepted at the 2022 BenchCouncil: International Open Benchmark Council

2021 **Software Solution for Western Digital - Senior Capstone Project *[Python, MySQL, HTML, CSS, PHP, Git]***
- Responsible for delegating tasks within the team and communicating with the company
- Successfully negotiated the scope of the project and provided a dashboard that collected/displayed information about their laboratory computers

PERSONAL PROJECTS

Course Availability *[2021] [Python] [Selenium]*
- Worked with a team to create a program that would check the number of available spots in a given UC Merced class and inform users of open seats
- Allows users to set up notifications and recieve updates for multiple classes using Discord
- Faster than Coursicle by approximately 1 to 3 minutes

Super Hexagon Bot *[2022] [C++] [OpenCV]*
- A program that can play the game "Super Hexagon"
- Uses image processing to collect location of obstacles
- Computes best path to avoid obstacles

Palindrome Calculator *[2020] [C++]*
- Calculated how many words in a given list were palindromes of each other
- Utilized a hash table to store all inputs and check the reverse of each word
- Unit tests ensured the accuracy of the program

Networking Project *[2021] [C/TinyOS]*
- Implemented logic allowing simulated nodes to send information to any node in the network
- Nodes utilize TCP to reliably send packets to each other
- Implementation included neighbor discovery, network flooding, link-state routing with dijkstra, and TCP

Snake Game *[2021] [C++] [OpenGL]*
- Recreated the classic snake game with a partner
- Used custom data structures for game objects
- Implemented textures using SOIL library

GDC Game Jam *[2020] [Python]*
- Worked with a team to create an original game during the Spring 2020 semester
- Responsible for programming the game and incorporating music/art created by the other members
- Successfully finished the game by end of the semester

EDUCATION

2019–
–2022 **University of California Merced - May 2022**
Bachelor of Science - Computer Science and Engineering (CSE)
Courses: Networks, OOP, Distributed Systems, Image Processing, Data Structures, Algorithms & Design

SKILLS

C/C++*(Advanced)*, **Python***(Advanced)*, **SQL***(Proficient)*, **C#**(*Proficient*), **HTML/CSS/JS***(Proficient)*, **Linux***(Proficient)*, **Git***(Advanced)*