

Colin Schmierer



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EDUCATION

2019– **University of California Merced** - May 2022

–2022 Bachelor of Science - Computer Science and Engineering (CSE)

Courses: Networks, OOP, Distributed Systems, Image Processing, Data Structures, Algorithms & Design

EXPERIENCES

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

2018– **San Joaquin Delta College Robotics Competition [Arduino]**

- 2019 • Constructed and programmed a robot with a teammate to follow a set path while avoiding obstacles
- Achieved 1st place in 2018 and 2nd place in 2019

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
- Sends updates through the Discord messaging platform
- Allows users to set up notifications for multiple classes
- 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

WORK EXPERIENCE

2020 **Amazon Fulfilment Center (SCK1) - Lift Operator**

Operated a lift machine to retrieve products from racks and deliver them to be packed and shipped. Worked from the beginning of July to the end of August 2020

SKILLS

Python (numpy, opencv2, tkinter, matplotlib) (Proficient), **C/C++** (Proficient), **MySQL** (Intermediate), **JavaScript** (Intermediate) **Linux** (Proficient)