

# 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
- Allows users to set up notifications and receive 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

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