

EDUCATION

University of California, San Diego

Expected Graduation Date: December 2022

B.S. in Computer Science w/ Business Minor, **Major GPA: 4.0**

Relevant coursework: Probability & Statistics; Advanced Data Structures; Design and Analysis of Algorithms; Web Client Languages; Software Engineering; Machine Learning meets Geometry; Deep Learning; Product Marketing & Management; Enterprise Finance; Digital Systems; Machine Learning for Robotics

EXPERIENCE

Su Lab w/ Professor Hao Su

November 2020- Present

Research Intern

- Collaborated with Alibaba engineers on the task of **active light sim to real** using stereo images to estimate the depth of real scenes while only training on simulated scenes through **Generative Adversarial Networks**
- Implemented and evaluated **AAnet** and **Cascade-Stereo** stereovision model performance on custom dataset
- Improved performance of existing stereo models on dataset by **93%** using novel network architecture
- Competed in class TOC Perception Challenge and achieved top 15 performance using a modified **Frustum PointNets** design

Association for Computing Machinery: Artificial Intelligence Branch @ UC San Diego

May 2020 – Present

Director of Operations of organization with 500+ members

- Presented real time **computer vision**, neural network design, and **reinforcement learning** workshops to **100+ students** and led talks from undergraduate research panels, industry professionals, and professors
- Developed AI competitions such as an **OpenAI** reinforcement learning competition and pathing hide and seek competition with turnouts of over **30 teams**
- Managed team of 8 event leads in designing **20+ AI workshops** and organized biweekly progress standups
- Designed **frontend** for organization's website and created **backend** architecture for AI competition evaluation with 10 views a day

Statistical Visual Computing Laboratory w/ Professor Nuno Vasconcelos

August 2019 – October 2020

Research Intern

- Used unsupervised domain adaptation and meta learning for **real- world single view 3D reconstruction**
- Implemented Occupancy Networks from scratch and evaluated performance on custom dataset
- Built dataset of household 3D objects in multiple domains (CAD, rendered scan, real world depth) to be used as a baseline for real world **domain adaptation** tasks

CSE 21: Mathematics for Algorithms and Systems Analysis @ UC San Diego

August 2020 – June 2021

Computer Science and Engineering Tutor

- Responsible for hosting office hours and individual/ group tutoring for **30 + students** to discuss class topics in more depth
- Organized grading distribution for assignments among tutors and made mid/ final grade reports for students
- Worked as point of contact between students with questions or concerns about assignments or grades and the professors

PROJECTS

Bullet Journal

March 2021 – July 2021

- **Project Lead** for team of 7 in building CRUD application using HTML, CSS, Javascript following Agile guidelines
- Created **CI/ CD pipeline** and feature branch workflow for group repository and unit tested code using Jest
- Created scrollable and selectable monthly view features that can filter by bullet type and date range
- Implemented import/ export feature that works with local storage and MongoDB backends

Argoverse Self- Driving Class Competition

March 2021 – July 2021

- Implemented **Seq2Seq** network w/ **Attention** as baseline model for competition and added social pooling
- Created a network with **Long Short- Term Memory** modules that achieves top 10 performance using encoder/ decoder architecture
- Presented project to class and helped other groups achieve top 20 performance

Sign Language Interpreter

August 2019 – December 2020

- Built an interpreter that utilizes state of the art **Fast R-CNN** to analyze webcam video streams for sign language signs using **image segmentation** and **classification** in real time
- Outputs the corresponding letter/word in real time to the user on the receiving end of the video call

Autonomous C- Bot @ UCI Hacks

February 2020- May 2020

- Designed a depth perception and object detection algorithm to identify and calculate the distance between C- Bot and the target car
- Built neural network controller to calculate optimal path for bot in a parking lot to reduce overall traffic while still maintaining safety in a **multi agent system**
- Implemented bot in **ROS Gazebo** with robot arms and 4 wheel drive and trained using reinforcement learning algorithms

SKILLS & AWARDS

- Languages: Python (Tensorflow, Keras, Scikit- Learn, OpenCV, Pytorch), Java, C++, Javascript (ReactJS), HTML, CSS, CUDA, Kubernetes, AWS
- Best Infrastructure Hack from Hack UCI (2020)
- Regents Scholarship: ~70 students selected out of 7000 students
- Top 10 out of class of 250 students in mini-Argoverse Kaggle Competition for CSE 151B (2021)