PEGGY (YUCHUN) WANG

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EDUCATION

STANFORD UNIVERSITY
M.S. (JUNE 2020), B.S. (JUNE 2020) IN
COMPUTER SCIENCE: ARTIFICIAL INTELLIGENCE TRACK
AI/ML/ROBOTICS

COURSEWORK

- Machine Learning (CS229)
- Robot Perception and Decision Making (CS336)
- Reinforcement Learning (CS234)
- Computer Vision (CS231N)
- Deep Learning (CS230)
- Natural Language Understanding (CS224U)
- Algorithms for Optimization (CS361)
- Robot Perception and Decision Making (CS336)
- Principles of Robotic Autonomy (AA274)
- Artificial Intelligence (CS221)
- Computer Graphics (CS248)
- Algorithms (CS161)
- Computer Systems (CS110)
- Applied Matrix Theory (MATH104)
- Linear Algebra and Differential Equations (MATH51)

SKILLS

- Proficient in C++, Python, Git, Matlab
- Used tools and libraries such as: Pytorch, Keras, Tensorflow, Numpy, ROS, OpenAI Gym, and OpenCV

EXTRACURRICULARS

Lead Event Organizer, Stanford Robotics Club

Sponsorship Chair, Stanford Women In Computer Science (WiCS)

Hackoverflow Hackathon Co-Chair, Stanford Women In Computer Science (WiCS)

WORK EXPERIENCE

SOFTWARE ENGINEERING INTERN, FACEBOOK AR/VR, OCULUS CORE TECHNOLOGY TEAM – JUNE 2019 - SEP. 2019

- Computer Vision, AI Systems Team in Oculus
- Designed and created end-to-end pipeline for camera reprojection of ground truth depth data and integrated into data collection system, improved efficiency by ~230%
- Created algorithm to speed up data processing by ~30%
- Created visualization frontend and backend system to compare different depth sensing algorithms using QT and OpenGL

SOFTWARE ENGINEERING INTERN, LYFT AUTONOMOUS DRIVING DIVISION (LEVEL 5 OFFICE) – JULY 2018 - SEP. 2018

- Created pedal model for vehicle kinematics in autonomy motion planning and controls team
  - Built Python plotting tools for scatter plot after linearly interpolating timestamps of different fields
  - Built control service in C++ with publisher/subscriber system to automatically test throttle and brake system at test site
  - Fitted and validated function model using Python and Matlab, improved previous model by 1.5x
- Refactored and integrated vehicle model into control system on test vehicles and simulation, created OpenGL visualization for comparing different models

RESEARCH EXPERIENCE

COMPUTER SCIENCE RESEARCHER, STANFORD INTELLIGENT SYSTEMS LAB, STANFORD UNIVERSITY – JAN. 2019 - PRESENT

- Used hierarchical reinforcement learning and utility value decomposition to develop a city-level policy for autonomous driving agents composed of low level policies trained on micro-scenarios

VISITING RESEARCHER, ADVANCED ROBOTICS LAB, UNIVERSITY OF EDINBURGH – JUNE 2018 - JULY 2018

- Performed analysis of Deep Reinforcement Learning Networks using OpenAI simulation environment for humanoid robot balancing, created phase plots and modeled control policy of agent

PROJECT EXPERIENCE

COMPUTER VISION/DEEP LEARNING PROJECT, CS231N CONVOLUTIONAL NEURAL NETWORKS FOR VISUAL RECOGNITION, STANFORD UNIVERSITY – SPRING 2019

- Semantic Image Segmentation for Autonomous Driving Scenarios Combining FCNs, DeepLab, and Attention

COMPUTER VISION/DEEP LEARNING PROJECT, UNMANNED AERIAL VEHICLE (UAV) CLUB, STANFORD UNIVERSITY – OCT. 2017 - JUNE 2018

- Detected, localized, and classified shape, color, and alphanumeric character of a poster object from an aerial image
  - Generated unique dataset of over 10,000 images by augmenting shapes and alphanumeric characters from EMNIST dataset onto aerial background image
  - Trained YOLO network to localize objects
  - Developed a Convolutional Neural Network using Keras to classify alphanumeric characters
  - Utilized k-means clustering to segment objects from background for color classification