KERRIE WU

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Education

Stanford University, Stanford, CA
M.S. Computer Science, concentration in Artificial Intelligence   expected Mar 2024
Massachusetts Institute of Technology, Cambridge, MA
B.S. Mechanical Engineering, concentration in Robotics   Jun 2018

Relevant Coursework

CS224U Natural Language Understanding   **CS231N** Deep Learning for Computer Vision
CS224N Natural Language Processing   **CS230** Deep Learning
CS271   Artificial Intelligence in Healthcare   **CS237**   Principles of Robot Autonomy I, II

Projects

Exploring Robustness of Stanford's Deepsolar Model to Distribution Shifts (CS230)
Improve the Deepsolar Model's performance on a new rooftop solar panel satellite image dataset using a data-efficient finetuning method (classification F1 score from 0.24 to 0.95, segmentation IOU from 0.06 to 0.40).

Can LLMs Accurately Assess Human Confidence in Climate Statements? (CS224U)
Benchmark modern LLMs' abilities to classify climate-science related facts according to human confidence levels using prompting. Scrape PDF climate reports to help create a novel natural language climate factoid and uncertainty-level dataset (link).

Recipe Creation with Controlled Text Generation (CS224N)
Implement, train, and evaluate LSTM and transformer-based models for generating ingredient lists from recipe titles using different pretraining/finetuning and decoding methods.

Collaborative Pick and Place Between Tandem Robotic Arms with Deep Q-learning (CS230)
Train two 3-DOF simulated robotic arms to place tokens at target locations collaboratively using deep Q-learning.

Work Experience

ILIAD, Stanford, CA   April - Jun 2023
Research Assistant
● Use and adapt vision/language machine learning models for exploratory interactive robotics research.

Waymo, Mountain View, CA
Systems Engineer   Sept 2020 - May 2022
● Design, run, and analyze A/B tests in simulation to investigate effects of control parameters and actuator limits on autonomous vehicle driving performance.
● Perform vehicle physics model validation and test model integration with wider simulation infrastructure.
Systems Test Engineer   Nov 2018 - Sept 2020
● Write software to automate test execution on autonomous vehicles.
● Coordinate, execute, and analyze tests for system validation. Debug system and test failures.

Cruise Automation, San Francisco, CA
Controls Intern   Jun - Aug 2017
● Prototype and evaluate algorithms for improving autonomous vehicle control performance.

NASA Jet Propulsion Laboratory, Pasadena, CA
Summer Intern   Jun - Aug 2016
● Design and build an automated imaging testbed for evaluating an image registration algorithm's performance for the Mars 2020 Rover, collecting and analyzing performance over 1600+ images.
● Authored abstract for submission to International Workshop on Instrumentation for Planetary Missions. (link)

Skills Python, PyTorch, Tensorflow, C++, ROS, SQL, Linux