Aydin Gokce

AI & Robotics Engineer

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SKILLS

Languages	Machine Learning/AI	Robotics	Web Development
Python, C, C++, Java, JavaScript, MATLAB, HTML, CSS, SQL, Bash	PyTorch, SKLearn, Computer Vision, Pandas, Numpy, SB3, Ray, Jupyter, Google Colab, OpenAI Gym, GPT-3, RL, RNNs, Transformers.	ROS, PyBullet, OpenCV, Fusion 360, Gazebo, Redis, 3D Printing, Soldering, Arduino, Raspberry Pi, Jetson Nano, Circuit Design, Pneumatics, UAS	React, Node.js, Express, SQL Databases, Firebase, Docker, AWS, Heroku

EXPERIENCE

AI Robotics Researcher
2022 August - Now

TREC Laboratory

- Use RL to learn control policies for bipetal robots.
- Builds high-fidelity simulations optimized for sim-to-real learning.
- Researches a generalizable sample-efficient sim-to-real learning pipeline to make robots useful to everyday humans.

Engineering Intern
2022 May - 2022 August

MITRE

- Engineered solutions for Autonomous Vehicles
- Researched optical flow, segmentation and recurrent depth estimation for event-based cameras.
- Developed AI pipeline for event-based object detection based on deep recurrent networks and semantic segmentation.
- Built a foundation for safe automotive stopping using event-based cameras.

AI Researcher
2021 September - 2022 May

Hume Center for National Security & Technology

- Researched emergent phenomena in distributed multi-agent reinforcement learning systems.
- Created a package for rapid & parallelized testing of reward functions.
- Discovered a reward which incentivized agents to strategically encircle and entrap a fleeing prey agent using emergent AI.

ML Research Assistant
2021 August - 2022 May

Johns Hopkins University

- Leveraged dimensionality reduction & visualization techniques to inspect Parkinsonian tremors.
- Employed classical machine learning to identify key qualities of signals indicative of Parkinson's.

- Built a classification model for telehealth and automated diagnosis applications.

Computer Vision Intern 2021 May - 2021 August
Furtrieve

- Created a landmark detection & image translation pipeline in Tensorflow.
- Trained & validated a successful canine 2D pose estimation model.
- Built a tool to automatically recognize behavioral disorders in canines.

2020 June - 2020 August
NLP Intern
George Mason University

- Leveraged classical ML to tokenize & cluster groups of text.
- Built pipeline to identify unique "fingerprint" of an author.
- Created plagiarism detection & mitigation software with low-level syntactic NLP.

UAV Intern 2018 June - 2018 August
IBionicS Laboratory

- Developed an API to control a quadcopter using a state-of-the-art textile interface.
- Built a ROS-based communication network between quadcopter and ground control.
- Demonstrated practical application of the sensor to control quadcopters.

EDUCATION

Virginia Tech 2021 May - 2023 May
B.S. Computer Science
Graduating at 19