Aydin Gokce
AI & Robotics Engineer

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EDUCATION

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

SKILLS

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

EXPERIENCE

AI Robotics Researcher • TREC Laboratory   2022 August - Now
- Use RL to learn control policies for bipetal robots with latent 3rd order dynamics.
- Builds high-fidelity simulations optimized for sim-to-real learning.
- Built and trained an RL position controller to continually maintain under 2% trajectory error.

Engineering Intern • MITRE   2022 May - 2022 August
- Developed AI pipeline for event-based path planning for autonomous vehicles.
- Set a new baseline (82 Dice score) for event-based segmentation.
- Discovered a critical vulnerability in the team's adversarial training pipeline.

AI Researcher • Hume Center for National Security & Technology   2021 August - 2022 May
- Researched emergent phenomena in distributed multi-agent reinforcement learning systems.
- Created an MLOps pipeline for rapid & parallelized testing of reward functions used by 12 teammates.
- Discovered a reward to incentivize 5 agents to encircle and entrap a fleeing prey agent using emergent AI.

ML Research Assistant • Johns Hopkins University   2021 August - 2022 May
- Leveraged dimensionality reduction & visualization techniques to inspect Parkinsonian tremors.
- Generated 20GB of synthetic training data.
- Built a 98% accurate tremor classifier.

Computer Vision Intern • Furtrieve   2021 May - 2021 August
- Curated a dataset with over 100GB of video training data.
- Built and trained a pipeline to detect 32 key landmarks in a dog's pose from a 2d image.

UAV Intern • IBionicS Laboratory   2018 June - 2018 August
- 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.

PROJECTS

- AI/Web3: unosa.xyz, 3214ai.com, cerebellia.com
- Robotics: Mordecai: Advanced Wearable Robot, Wheatley: 2020 FRC Robot, Custom Race Drone