Enes Erciyes

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Education



New York University (Courant Institute)

MS, Computer Science Sep 2023 - June 2025

- Relevant Coursework: Deep Learning (Yann LeCun), Heuristic Problem Solving (Dennis Shasha)



Koc University

BS, Computer Science - Electrical and Electronics Engineering (DM) Sep 2018 - June 2023 | GPA: 3.85

Experience



Generative AI Research Engineer

Codeway Studios | Istanbul, TR

Dec 2022 - Sep 2023 (10 months)

- I shipped the video diffusion models behind the <u>Video AI</u> app that has over 500K downloads.
- I improved the video stylization method TokenFlow by replacing its slow token flow computation part done with DDIM inversion and NN matching by training a UNet for predicting this flow. This allowed real-time performance (x10 speed gain).
- I decreased the inference time of our animation method x2 through StableDiffusion.cpp and refactoring. This increased user retention by 30 percent and saved 5,000\$ in monthly server costs.

EPFL

Research Intern

EPFL - Visual Intelligence for Transportation Lab | Lausanne, CH

Jul 2022 - Oct 2022 (4 months)

- I researched a hierarchical policy learning method that uses MCTS with a learned world model for searching goal waypoints and a policy network conditioned on waypoint for actions.
- I used the BEV representation of a real world traffic dataset.
- This research was funded by the Summer@EPFL program.



Applied Machine Learning Engineer Intern

Wayve | London, UK

Jan 2022 - June 2022 (6 months)

- As part of the Machine Learning Platform team,
 - I rewrote the platform for running autonomous driving simulations to allow better parallelization.
 - Then, I scaled the number of simultaneous scenarios by 1000% using up to 3000
 GPUs in Azure. Blog Post
- As part of the Autonomy team,
 - I used SfM to obtain camera poses from previous test runs.
 - Using NeRFs trained to reconstruct previous drives, I created a prototype for a closed-loop test simulator which can test different models with different initial configurations in those drives. <u>Blog Post</u>



Undergraduate Research Assistant

Koc University Autonomous Vision Group | Istanbul, TR

Jun 2021 - Jan 2022 (8 months)

- I developed RL agents that use real time extracted BEV maps to drive in CARLA. Improved our <u>Driving Score</u> by 3 points.
- I experimented with many RL algorithms like SAC, PPO, TD3.
- I researched model-based RL with world models for autonomous driving.
- I created <u>carlaslurm</u>, a CLI tool for running CARLA jobs on SLURM clusters.

Projects



Co-founder & Team Captain

SPARK Autonomous Vehicle Team / Koc University AI and Robotics Society Jan 2020 - Aug 2021 (2 years)

Project Page | Code

- I co-founded a team of undergraduate students and built a two-seated autonomous car from scratch.
- I led the creation of the main code base of an autonomous car using C++ and Python with ROS and ROS2.
- I led the development of these modules: object/lane detection, GPS localisation, traffic sign detection, LIDAR object avoidance, behavior planning, path planning and control.
- I supervised teams building deep learning solutions on object detection and lane detection stack with PyTorch, from data collection to real-time model deployment on NVIDIA AGX platform.
- I worked on setting up the drive-by-wire electronics and battery system of our car.
- I oversaw the collection of 20,000\$ in sponsorship and communication with external stakeholders.
- We won the **Best Software Design Award** and became **one of five teams** out of 32 finalists that completed the race track in a national self-driving car competition.



Video Prediction with SlotAttention

NYU Deep Learning Term Project

- I trained a model to predict the semantic segmentation mask of the last frame (22nd) of a video using its first 11 frames.
- Project in progress for leaderboard.



Latent Plan.jl

Reproduction of "Trajectory Autoencoding Planner" in Knet.jl

Tech Report | Code

 I reproduced the results from "Efficient Planning in a Compact Latent Action Space" in Julia using a minimal auto-grad engine, Knet.

Awards



Fulbright Association

Master's Scholarship Recipient

- 50,000\$ annually for two years awarded for master's degree in the United States
- I am one of just two Computer Science students who received this scholarship in Turkey in 2023.



American Turkish Society

Promising Turks Fund Recipient

• 10,000\$ stipend for promising Turkish students studying in the US.