Enes Erciyes

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Education

New York University (Courant Institute)
MS, Computer Science
Sep 2023 - May 2025

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

Experience

Graduate Research Assistant
CILVR Lab | New York, NY
Jan 2024 - Current

- Working on JEPA architectures for video prediction in Yann LeCun's group.

Generative AI Research Engineer
Codeway Studios | Istanbul, TR
Dec 2022 - Sep 2023 (10 months)

- I shipped the video diffusion models behind the Video AI 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.

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.

Autonomous Driving ML 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. Blog Post

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 Driving Score 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 carlaslurm, 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 DL 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 and Pseudo-Labelling
NYU Deep Learning Term Project
Code

- I trained a model to predict the semantic segmentation mask of the last frame (22nd) of a video using its first 11 frames.
- I placed 2nd out of 118 students taking the course in the final 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