EGE HOSGUNGOR

Senior Robotics Data Scientist

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EXPERIENCE

Senior Robotics Data Scientist

Ocado Technology

2022 - Present

- Building Data-Driven and Model-Driven Systems to improve Ocado's operations of bots.
- Led Crash Detection System A Hybrid System where we utilize Computer Vision and accelerometer time series data to detect bot crashes. Object detection and object pose estimation models are used.
- Led Wireless Signal Forecasting where we utilized traditional machine learning techniques with
 unique signal data from our bots to forecast wireless network coverage and foresee complications
 beforehand in our warehouse designs, reducing risk of losing millions of \$ per CFC.
- Designed and run research experiments for developing an iterating on new techniques
- Causal Inference on Software Release Strategies with A/B Testing Experiments

Reinforcement Learning Engineer

Dcipher Analytics

2020 - 2022

- Implemented RL algorithms / environments for NLP domain: Sentiment Analysis on stock markets **Gym, TF, Ray and GCP.**
- Led an end-to-end multi class, multilabel machine learning project for Avalanche Risk Prediction funded by TUBITAK.

Software Engineer

KARMA Lab Immersive Technologies

2018 - 2019

- Coordinated KARMA Lab's 3 VR/AR/MR projects: KU-TWIN, Isles of Emotion, Psychosis
- Led a group of 15 people from different backgrounds including professionals, PhDs, and grad students.
- Worked on creating a simulation/ "Digital Twin" of campus for VR by utilizing photogrammetry techniques and Unity.

EDUCATION

MSc Advanced Computer Science

University of Sussex

2019 - 2020

- Dissertation: "Pandemic Simulation with Reinforcement Learning"
- Area Courses: Machine Learning/ Engineering Reliable and Scalable Project / E-Commerce Systems
- Distinction, First Class Honor (4.0 GPA)

BSc Mechanical Engineering

Koc University

2014 - 201

- Senior Project: "A Haptic Feedback Glove for Virtual Reality" Best Engineering Project Award.
- Area Courses: Rocket Propulsion / Finite Element Analysis /Corporate Dynamics for Engineers

PROJECTS

- <u>SMSBOTU</u> SaaS product that brings internet access via SMS for the people who don't have reliable internet connection but still in the GSM coverage. Currently 300+ users and monthly 20 beta testers. (Langchain, OpenAl API, Fastapi, GCP Cloud Run, Firebase, Nextjs, Tailwind)
- Competed in <u>5 different Kaggle Competitions</u> (details can be found in my portfolio).
 (Numpy, Pandas, Sklearn, XgBoost, LightGBM, Keras, Torch, Tensorflow Matplotlib, Seaborn)
- Academic Article Classification (NLP Project)
- <u>Pandemic Simulation with Deep Reinforcement Learning</u> Training RL agents in a continuous action space and continuous state space pandemic outbreak simulation to measure the success rate of social distancing strategies by using RL techniques. The environment had a Showcased in Unity's Webpage.
 - (TF-Agents, Gym, TensorFlow, AWS EC2, Unity)
- A Vibrotactile Hand Interface for VR was the final year awarded as the Best Engineering Project Class of 2018-2019 Award. It was presented in the biggest VR event of Europe VRDays Exhibition in Amsterdam afterwards. (Computer Vision, Hand-Tracking, Arduino, C, 3D printing, Hardware Design)