

AMIR KHOSHNAFS

Machine Learning Engineer | Computer Vision | Deep Learning

Izmir, Turkey | ✉ amir_khoshnafs@yahoo.com | 📞 +90 539 544 5624

🌐 github.com/amirkhoshnafs | 🔗 linkedin.com/in/amirkhoshnafs | 🌐 amirkhoshnafs.com

Summary

Junior machine learning engineer focused on **computer vision** and **deep learning**. Built modular Python projects in object detection, segmentation, and video analytics, with particular interest in training behavior, model design, and reliable evaluation. Backed by a **quantitative economics** background and ongoing graduate study in **statistics**.

Technical Skills

Programming: Python, SQL, Git, Linux/Bash

Deep Learning / Computer Vision: PyTorch, YOLOv8, U-Net, image classification, object detection, image segmentation, multi-object tracking, OpenCV

Additional Topics: autoencoders, GANs

Workflow: train/validation/test splitting, reproducible pipelines, model evaluation, error analysis, visualization, reporting

Statistics: probability, estimation, optimization theory, regression, multivariate statistics

Selected Projects

Perspective-Aware Vehicle Speed Estimation

Python, YOLOv11, ByteTrack, OpenCV

- Built a traffic-video pipeline combining vehicle detection, multi-object tracking, perspective transformation, and approximate speed estimation from monocular video.
- Added ROI-based measurement, speed smoothing, and stability logic to improve the reliability of estimated speeds.
- Exported frame-level and track-level outputs in CSV and JSON formats for later analysis and overspeed review.

Face Mask Detection with YOLOv8

Python, YOLOv8, OpenCV

- Built a script-based project that prepares data, a YOLO format, and creates seeded train/validation/test splits.
- Trained and evaluated a YOLOv8 baseline on held-out data, with inference support for images, folders, video, and webcam input.
- Added a review workflow for missed detections, low-confidence cases, crowded scenes, and incorrect mask use.

U-Net Salt Segmentation with PyTorch

Python, PyTorch

- Implemented a U-Net baseline for binary salt-mask segmentation using modular dataset, model, training, and metric components.
- Evaluated performance with Dice and IoU on a validation split, and saved loss curves and sample predictions for inspection of training behavior.

Experience

Financial Educator / Analyst

Sep 2024 – May 2025

Global Trading Insights

Remote

- Produced and published 30+ educational videos on global trade, economics, and market dynamics.
- Reviewed YouTube Studio metrics, including click-through rate, retention, and traffic sources, to improve topic selection and presentation.

Finance Analyst Intern

Jul 2024 – Aug 2024

Abbaszadeh Group

On-site

- Supported expense and cash-flow tracking in Excel for monthly financial reporting.
- Conducted market research on currency trends and trade operations, and organized reports for management review.

Education

Graduate Studies in Statistics

2025 – Present

Ege University

Izmir, Turkey

Relevant focus: statistical learning, multivariate statistics, computational statistics, and optimization.

B.Sc. in Economics

2020 – 2025

Dokuz Eylul University

Izmir, Turkey

Relevant background: econometrics, regression analysis, statistics, and financial analysis.

Languages

Persian (Native), Turkish (Native), Azerbaijani (Native), English (Fluent)