KEMAL KILIÇASLAN

AI DEVELOPER

CONTACT

kemalkilicaslan@outlook.com
kemalkilicaslan.com
linkedin.com/in/kemalkilicaslan
github.com/kemalkilicaslan
+90(543) 201 8373

SKILLS

- Python
- Machine Learning
  - scikit-learn
- Deep Learning
  - TensorFlow
  - PyTorch
- Computer Vision
  - OpenCV
- C++
- MATLAB
- Wolfram Mathematica
- PostgreSQL
- Front-end
  - HTML
  - CSS
    - Bootstrap
  - JavaScript
- Swift
- LaTeX

PERSONAL INITIATIVES

- Kastamonu Üniversitesi Matematik & Bilim Topluluğu **(Founding President)**
- Türkiye Matematik Kulübü **(Member)**

CERTIFICATES

- Machine Learning Specialization
- Deep Learning Specialization
- Mastering Programming with MATLAB
- Version Control
- System Engineering
- Mathematics for Machine Learning Specialization
- Self-Driving Cars Specialization

EDUCATION

- **KASTAMONU UNIVERSITY FACULTY OF SCIENCE AND LITERATURE MATHEMATICS**

  2022 Graduate - Bachelor's Degree

EXPERIENCE

- **BİLGİ TEKNOLOJİLERİ VE İLETİŞİM KURUMU - AI TRAINER WITH PYTHON**
- **CALORIN - COMPUTER VISION DEVELOPER**

PROJECTS

- **Face Detection and Person Recognition System:** A versatile face detection and person recognition system using computer vision and deep learning. Provides a modular toolkit for detecting faces and identifying specific individuals in static media (images, videos) and real-time webcam streams using the Haarcascade classifier algorithm.
- **Road Lane Lines Detection System:** A real-time road lane detection system using computer vision techniques for autonomous vehicles. Features Canny edge detection, ROI masking, and Hough Transform to identify road lane markings in video streams, processing visual data for accurate lane boundary detection with OpenCV and Python for ADAS applications.
- **Garbage Classification with Convolutional Neural Network (CNN):** A garbage classification system using Convolutional Neural Networks with TensorFlow/Keras. Classifies waste into 6 categories (cardboard, glass, metal, paper, plastic, trash) using the TrashNet dataset, achieving 62.2% accuracy with real-time image prediction capabilities for automated recycling applications.
- **Pose Detection with YOLOv8 using Wolfram Mathematica:** A pose detection system using YOLOv8 within Wolfram Mathematica. Features real-time human pose estimation with 17 keypoint detection on the MS-COCO dataset, skeleton visualization, and comprehensive analysis tools leveraging pre-trained models from Ultralytics for accurate body pose recognition and movement tracking.
- **Facial Expression Recognition System:** An expression recognition system using deep learning with VGG19 architecture trained on the FER-2013 dataset. Classifies 7 emotions (angry, disgust, fear, happy, neutral, sad, surprise) from grayscale facial images, achieving 66.33% accuracy with transfer learning and data augmentation techniques using PyTorch.
- **Vehicle Speed Estimation System:** A real-time vehicle speed estimation system using YOLOv8 object detection and perspective transformation. Tracks multiple vehicles within a defined ROI, calculates speeds in km/h using geometric principles with confidence threshold filtering, and provides annotated video output for traffic monitoring and analysis applications.
- **Data Visualization of Turkey Population with Plotly:** A comprehensive data visualization project of Turkey's population from 1927 to 2023 using Plotly and Folium libraries. Features interactive charts (line, bar, stack bar, pie, donut), geographic maps with choropleth method, and demographic analysis across 81 provinces with male, female, and total population data from TURKSTAT, including gender distribution trends and historical comparisons.
- **Traffic Signs Recognition, Vehicle Plate and Person Blurring System:** A comprehensive computer vision system for real-time traffic sign recognition (24 classes including frequently encountered signs in Turkey) with automatic privacy protection through vehicle plate and person blurring. Built with custom-trained YOLOv11 models on custom datasets, achieving 80% confidence threshold for GDPR-compliant surveillance and autonomous vehicle applications.
- **Safety Lane Violation Detection System:** A real-time safety lane violation detection system using YOLOv12 object detection and tracking with OpenCV. Monitors emergency lane usage within user-defined ROI, detects and tracks vehicles crossing safety boundaries, and provides live violation statistics with color-coded visualization for traffic enforcement applications.
- **Vehicle Distance Measurement System:** A real-time vehicle distance measurement system using YOLOv12 and perspective geometry. Calculates distances to surrounding vehicles in three ROI lanes with adaptive warning thresholds, automatic license plate blurring for privacy protection, and color-coded safety indicators for dashcam applications.
- **Video to Audio Converter Desktop App:** A professional native macOS desktop application developed with SwiftUI and FFmpeg for extracting high-quality audio from video files. Supports 19 audio output formats (lossy, lossless, and professional codecs), batch processing, drag-and-drop file handling, real-time video preview, and conversion progress tracking. Implements an MVVM architecture with AVFoundation for media analysis, FFmpeg process management for audio encoding, customizable metadata editing, dark/light theme switching, and 10-language localization for a modern, user-friendly multimedia conversion experience.