EE 4x97 - EE 4x98

FALL 2025 -2026

Project Name	Group Members
Microstrip Patch Antenna Design and Simulation	Mustafa Başboğa
Unified Framework for Language and Speaker Recognition in Audio Streams	Atabey Aydı
Human Body Pose Estimation Using Deep Learning	Muhammed Ali Yesin, Mehmet Akif Takcı
Object Tracing with Kalman Filter Using a Microcontroller	Aylin Doğan
Edge-Deployable COVID-19 CT Scan Classification System	Ekrem İlker Ertürk
Machine Learning-Based Video Super-Resolution	Yiğit Yektin
Design and Simulation of a Rectangular Microstrip Array Feed Antenna for C-Band Satellite Communications	Abdulkadir Erdoğdu Necip Berker Altan Ali Yelten
Course Content Viewing Application	Elif Türk
433 MHz RF Field Strength Meter and Visualization Panel	Selman Taha Şıklaroğlu
Smart Device for lung health monitoring	Orçun Sargın
Self-Host Server Based IoT Plant Health Monitoring System	Ahmet Alihan Kedikli,Ahmet Zekeriya Devran
Battery Consumption Estimation of UAVs Using Telemetry Data and Machine Learning-Based Approach	Semih Yıldız, Ahmet Tuğrul Berber
Comparative Analysis of Model Predictive and AI-Enhanced PID Control for DC Motor Systems	Furkan Dertlioğlu, Vahap Ömer Yeşilyurt
CAN Bus Network Implementation for Real-Time Data Acquisition	Mehmet Karayazgan
IoT Based Smart Parking	Boran Varol Berkay Göç
AI-Based Automated Matching Network Design for GSM Antennas on Different PCB Platforms	Alperen Tufan Pelit
Smart Pole Design	Atahan Karaoğluol
Coordination of Flexible Devices for Multi-Community Smart Energy Services and Peer-to-Peer Energy Trading	Mercan Tuana Polat Furkan Karaca

Coordinated Deployment of PV-Integrated Mobile Energy Storage Fleets with Dynamic Multi-Regional Prioritization for Sustainable Post-Disaster Resiliency of Local Grids	Sıla Zengin Sıla Kesir
Overnight Energy Management of Electric Buses in Urban Public Transport	Alican Karaman
Causal Poisson-Gaussian Video Denoising for Low-Light & Film Restoration	Abdullah Altepe
Smart Market System Using Computer Vision and Embedded Systems	Berkay Nak Zeki Demir
A Cheap Solution for 3D Mapping Using LiDAR in Enviroment of Robot Operating System	Mahmut Nedim Göç Emre Güner
Real-Time Vision-based Drone Detection and Pan-Tilt Tracking System Using Raspberry Pi	Mustafa Öztürk
AI-Based Smart Surveillance System for Public Safety	Sıla Ilgıt Kılınç
Training a Camera-Based Object Detector and Q&A System for Earthquake Scenarios	Rüzgar Batı Okay Eren Karagül
AI-Based Underwater Object Recognition Using Deep Learning (Phase 1 of Visual Chatbot System)	Fatime Emin
Reinforcement Learning Based Real-Time Adaptive Noise Cancellation on Embedded Hardware	Tarık Erdoğan
Emotion-Based Music Recommendation System	Yiğit Yılmaz
Embedded Machine Learning-Based Occupational Safety Monitoring Kit	Yusuf Zivaroğlu Taner Kahyaoğlu
SmartDrip: Smart Drip Irrigation Monitor	Mehmet Mete EKER Muhammet Emre MEMİLİ
Construction of an SDR-Based Two-Dimensional Real-Time Tracking and Visualization System	Caner Kurdoğlu Alp Osman Altunsoy Eren Tuna Gülbahar
A Modular SDR-Based ToF Localization Architecture with Station Placement Optimization and TCP/UDP Communication	Burak Efe Sıla Albayrak
A Dual Band Antenna Operating at Ka Band	Şeref Keser
Smart DoA Estimation and Adaptive Beamforming System Enhanced with Machine Learning-Based Threat Classification	Mehmet Burak Altıntaş Kerem Ergünay
Intelligent DoA Estimation and Adaptive Beamforming System	Mustafa Cihan Önal Furkan Cüneyt Soy
Deep Learning Based Modulation Classification in Direction of Arrival Estimation	Sertan Göktuğ Başarıcı Alihan Kocaakman
Privacy-Preserving Network Intrusion Detection Using Differential Privacy and Machine Learning	Kadir Yokuş

Kalman Filter-Based User Tracking Approach Using Cellular Signal Data and Machine Learning Algorithms	Emre Berkin ÇETİN Osman Eren KÖSE
Indoor Drone Navigation for Source Detection	Burakhan Sinan, Yusuf Oruç, Ahmet Çetin
AI Agent-Based Cybersecurity Intrusion Detection and Mitigation Using Kalman Filters and Reinforcement Learning	Mehmet Bahçeci
TheraFish: A Therapeutic Mobile Fishing Game Enhancing Finger Dexterity, Coordination, and Attention	Hakan Yurtluk
Development of an AI-Powered Image-Assisted Defect Detection, Analysis and Classification System for Aircraft Surfaces Using Advanced Deep Learning Models and 3D Visualization Techniques	Livanur Erdem Begüm Satıcıoğlu
Comparison of Rule Based and Non-Rule Based Methods for Audio Source Localization	Ahmet Berke Tunca
Comparing Speed Control of Permanent Magnet Synchronous Motor (PMSM) with Harmonic Control Arrays (HCA) and Vector (Field Oriented) Control	Gökhan Dağ Egemen Örnekli
Comparative Performance Analysis of Harmonic Control Array and PR+IMC Controllers in Single-Phase Series Active Power Filters	Esin İlbasan
Autonomous Parking System	Muhammet Yusuf Kayhan Emirhan Şener
Quadruped Earthquake Search Robot With Teleoperation	Erkan Tiryakioğlu
Atmospheric Absorption and Power Budget in 6G THz Systems	Sabri Üstündağ
RFID-Based Smart Lock System with Smart Home Integration	Mehmet Eren Başoğlu