

| Advisors   | Topics  |
|------------|---|
| <b>TY</b>  | AI<br>Machine Learning<br>Deep Learning<br>Data Analysis<br>Image Processing  |
| <b>MO</b>  | Mobile apps<br>NLP<br>Machine translation   |
| <b>SY</b>  | AI<br>NLP<br>Machine Learning<br>Big Data<br>Mobile   |
| <b>EBS</b> | Classification of medical images<br>Clustering of expressive faces<br>Comparison of Clustering algorithms<br>Comparison of Reinforcement Learning algorithms  |
| <b>UÇ</b>  | Survey of Anomaly detection methods (Artificial Immune Systems and so on)<br>Domain specific text categorization and summarization (NLP in Turkish and other languages)<br>Children's Data Privacy in the Digital Age (Data science and NLP)<br>Simulation of socio-economic systems (Agent-based modeling)<br>Dynamic Route Optimization based on prediction (LSTMs combined with Ant Colony Optimization)   |
| <b>HA</b>  | Filter design for image processing with genetic algorithm (evolutionary computation)<br>Fixed-point implementation of simple mathematical functions for microcontrollers (embedded computing)<br>Arithmetic with automatic differentiation through OOP (computational mathematics)<br>Arbitrary precision arithmetic library (computational mathematics)<br>Implementation/comparison of different parallelization techniques for matrix multiplication on GPU (parallel programming) |
| <b>ÖK</b>  | Blockchain<br>Cyber Security<br>Data Security<br>Secure and private AI (at most 3 students)<br>Formulate a use case that uses homomorphic encryption to do computations over encrypted data<br>Microsoft Private AI Bootcamp and other sources<br>A general survey, execution of existing codes, develop strategies for improvement)<br>Integrate, discuss,, crypto techniques, implement smart contracts.  |