Mekan Myradov

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Education

- **Sabanci University** — Istanbul, Turkey
  MSc in Data Science; GPA: 3.54 — *Sep 2022 - Current*
  Courses: Machine Learning, Pattern Recognition, Deep Learning, Network Science, Big Data Processing Statistical Modelling, Statistical Inference, Engineering Optimization.
- **Kirklareli University** — Kirklareli, Turkey
  BS in Software Engineering; GPA: 3.71 — *Sep 2018 - Jun 2022*

Experience

- **Sabanci University** — Istanbul, Turkey
  Teaching Assistant — *Sep 2022 - Current*
  - **Courses:** Software Engineering, Advanced Programming
  - Held weekly recitation session and office hours.
  - Graded programming homework and examinations.
  - Helped students so they can follow software development lifecycle best practices.
- **Kirklareli University** — Kirklareli, Turkey
  Research Intern - Asst. Prof. Edip Serdar GÜNER — *Nov 2021 - Jun 2022*
  - Participated in the project that was about the creation and analysis of a Turkish drug reviews dataset from social media.
  - Created a dataset by compiling Turkish drug reviews from social media.
  - Analyzed dataset using text mining methods (Zemberek and VNLP).
  - Sentiment Analysis with Hugging Face models (Turkish BERT etc).
- **Cognitiwe AI** — Istanbul, Turkey
  Research Intern — *May 2021 - Sep 2021*
  - Dealt with feature detectors for images
  - Worked with SIFT (Scale Invariant Feature Transform) method
  - Worked with SURF (Speeded-Up Robust Features) method
  - Worked with ORB (Oriented FAST and Rotated BRIEF) method
- **Mimix AI** — Istanbul, Turkey
  Research Intern — *Dec 2020 - Apr 2021*
  - Worked with face swap methods especially DeepFaceLab components
  - Worked with CNN-based face detection methods (S3FD)
  - Worked with CNN-based face alignment methods (2D-FAN)
  - Worked with CNN-based face segmentation methods (TernausNet)
  - Used autoencoders to learn mappings between faces

Publications

- **SCITUNA: Single-Cell data integration tool using network alignment**, BMC Bioinformatics, 2025.
  Aissa Houdjedj, Yacine Marouf, **Mekan Myradov**, Onur Dogan, Burak Onur Erten, Oznur Tastan, Cesim Erten and Hilal Kazan
  [PDF] / [Code]

Academic Projects

- **A Toolbox for ANOVA and Linear Regression (May '25)**
  Comprehensive statistical analysis toolkit that implements
  - One-Way ANOVA (group comparison, contrast analysis)
  - Two-Way ANOVA (two-factor analysis with interaction effects)
  - Multiple Linear Regression (parameter estimation, hypothesis testing, prediction intervals)
  - Multiple comparison corrections (Bonferroni, Sidak, Scheffe, Tukey) with individual and simultaneous confidence intervals

  [PDF] / [Code]
- **Synthetic Data Generation with Gaussian Mixture Models (Sep '23)**
  Implemented a synthetic data generation algorithm in Python using Gaussian Mixture Models
  [PDF] / [Code]

Academic Activities

- **International Conference on Research in Computational Molecular Biology** — Istanbul, Turkey
  Participant — *Apr 16, 2023 - Apr 19, 2023*
- **Workshop on the analysis and integration of single-cell RNA-seq datasets** — Antalya, Turkey
  Instructor — *Mar 23, 2023*

Certifications and Courses

- Machine Learning Specialization (Coursera – Andrew Ng).
- Deep Learning Specialization (Coursera – Andrew Ng).

Honors and Awards

- TUBITAK Research Scholarship, 2022-2025.
- Sabanci University Tuition Waiver Scholarship, 2022-2026.
- Kirklareli University – High Honor Graduate

Skills Summary

- **Software Development Lifecycle:** Agile Methodologies (Scrum), Coding Standards, Code Reviews, Resource Management, Development Processes, Deployment, Testing and Operations
- **Programming Languages:** Python, R, C, C++, Java, SQL, Unix/Shell Scripting
- **Libraries:** NLTK, OpenCV, NumPy, SciPy, Pandas, Matplotlib, Seaborn
- **Machine Learning & Deep Learning:** Spark MLlib, Scikit-learn, TensorFlow, PyTorch, CNNs, RNNs, Transformers, Autoencoders, Gaussian Mixture Models
- **Big Data & Cloud Technologies:** AWS, Hadoop, Apache Spark, Snowflake
- **Development Tools & Platforms:** GIT, Linux, Unix
- **Text Processing & NLP Libraries:** Zemberek, VNLP, Hugging Face Transformers
- **Domain Expertise:**
  - Computer Vision (SIFT, SURF, ORB, Face Detection/Alignment/Segmentation)
  - Natural Language Processing (BERT, Sentiment Analysis, Text Mining)
  - Computational Biology & Bioinformatics (Single-cell RNA-seq analysis)

Additional Information

- **Military Service:** Feb 2024 - Feb 2025