

# Mekan Myradov

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## EDUCATION

- **Sabanci University** Istanbul, Turkey  
*MSc in Data Science; GPA: 3.54*  
Courses: Machine Learning, Pattern Recognition, Deep Learning, Network Science, Big Data Processing  
Statistical Modelling, Statistical Inference, Engineering Optimization.  
*Sep 2022 - Jul 2026 (Expected)*
- **Kirkclareli University** Kirkclareli, Turkey  
*BS in Software Engineering; GPA: 3.71*  
*Sep 2018 - Jun 2022*

## 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

- **Single-Cell Multiome Analysis (Dec '25)**  
A comprehensive deep learning pipeline for analyzing single-cell multiome data, benchmarking multiple state-of-the-art integration methods including CCA, Joint VAE, MultiVI, MOFA+ and Seurat (Weighted Nearest Neighbors).  
[PDF] / [Code]
- **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

- **Int. Symposium on Health Informatics and Bioinformatics (HIBIT)** Istanbul, Turkey  
*Talk*  
*Oct 31, 2025 - Nov 1, 2025*
- **Int. Conf. on Research in Computational Molecular Biology (RECOMB)** Istanbul, Turkey  
*Participant*  
*Apr 16, 2023 - Apr 19, 2023*
- **Workshop on the analysis and integration of single-cell RNA-seq datasets** Antalya, Turkey  
*Participant*  
*Mar 23, 2023*

## EXPERIENCE

- **Sabanci University** Istanbul, Turkey  
*Teaching Assistant*
  - 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.*Sep 2022 - Current*
- **Kirkclareli University** Kirkclareli, 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-NLP and VNLP).
  - Sentiment Analysis with Hugging Face models (Turkish BERT etc).

- **Cognitive AI** Istanbul, Turkey  
May 2021 - Sep 2021
  - *Research Intern*
    - 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  
Dec 2020 - Apr 2021
  - *Research Intern*
    - 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

## CERTIFICATIONS AND COURSES

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

## HONORS AND AWARDS

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- TUBITAK Research Scholarship, 2022-2025.
- Sabancı University Tuition Waiver Scholarship, 2022-2026.
- Kirkklareli University – High Honor Graduate
- Success Scholarship for outstanding academic performance, 2019-2022.
- National Olympiad in Informatics 2017 – awardee
- National Olympiad in Informatics 2016 – awardee

## SKILLS SUMMARY

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- **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, Jira, 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)

## SERVICE

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