

# Ilyas Mustafazade

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## Education

Yildiz Technical University, BS Computer Engineering, Expected 2025, CGPA: 3.66

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## Experience

### Data Science Intern

Jul 2022 - Aug 2022

### QSS Analytics

Baku, Azerbaijan

- Wrote a web app using streamlit that allowed users to import datasets, configure models, run models, and see their results through GUI
  - Implemented MLP model, backpropagation, and K-means clustering algorithms from scratch to use in classification and regression tasks on popular datasets from Kaggle that achieved <15% error rate consistently
  - Used Python libraries to visualize datasets, apply transformations, and create reports about models' performance
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## Projects

### [MapReduce](#) | Go

Implemented distributed and fault-tolerant MapReduce system

### [Social network analysis](#) | Python, Flask, HTML, networkx, scipy

- Implemented PageRank algorithm without using external libraries
- Used external libraries to run HITS and community detection algorithms and captured their output
- Made a UI for choosing algorithms and datasets and seeing output of algorithms and visualization of the social network graph

### [Association rules](#) | Rust

Implemented Apriori algorithm to mine 2-item association rules from a transaction dataset

### [Hobby store](#) | Python, Flask, HTML, psycopg, PL/pgSQL

Wrote a hobby store application that has user login/register, showing items on sale, searching an item, sorting by a feature, filtering by color, buying or selling an item, showing account info, showing bought items, deleting account, showing price statistics, and showing items in the given price range features

### [Morphology](#) | x86 assembly

Implemented computer vision erosion and dilation algorithms

### [8086 simulations](#) | x86 assembly, 8086 and other hardware

Designed interfacing circuitry and programmed a 8086 to make a music player and other applications

### [Multiplication game](#) | Java, Swing

Made a multiplication game for kids, keeping multiple players' data in JSON files, showing admin a unique page with a table report of all players' games and performance, and showing players a high-score table

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## Technical Skills

**Languages:** Rust, C++, Go, C, Python, SQL, Java, x86 assembly

**Technologies:** PostgreSQL, LLVM, scikit-learn, NumPy, pandas, Matplotlib, Git/GitHub