

Yusif Mehdiyev Musa

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Azerbaijan, Baku


OBJECTIVE

Enthusiastic and dedicated mathematics and computer science enthusiast with a strong interest in both pure and applied mathematics. Eager to deepen my knowledge of advanced mathematical concepts and leverage analytical skills in a challenging academic or professional environment.



EDUCATION

- **ADA University** 2024 - Since
Bachelor of Science in Mathematics Baku, Azerbaijan
 - Rector's List of Honor
- **Full Secondary School Numbered 12** 2013 - 2024
Secondary Education Baku, Azerbaijan
 - GPA: 3.95/4.00
 - SAT: 1500/1600 (790 M, 710 W/R)
 - 11th grade National Exam: 281/300
 - 9th grade National Exam: 262/300
 - 9th grade Honor's Degree

PROJECTS

- **Cormat: 3D math software from scratch** March 2024 - Since
Tools: C++, Cmake, OpenGL, GLFW, ImGui, GLSL shaders 
 - Developed OpenGL pipeline system to render the mathematical graphs
 - Implemented various algorithms and data structures for various purposes
 - Implemented Object Oriented Programming structure to organize the project
 - Planning to use advanced mathematical skills to optimize the rendering and improve the aesthetical quality of the project

PUBLICATIONS

- **Probability and Statistics notes** March 2024 - Since
Personal notebook in a style of a book for educational and personal purposes 
 - Talks about Probability Theory, Statistical Inference and its methods, various Statistical models, Simulations and Math behind Machine learning.
 - Planning to include coding examples in Python libraries such as pytorch, scikit-learn, scipy and R using tidyverse packages.
- **Real Analysis notes** September 2024 - Since
Personal notebook in a style of a book for educational and personal purposes 
 - Includes notes about core topics of real analysis: completeness of reals, sequences, limits, derivatives, integrals.
 - Wrote proofs to selected exercises, and practiced proof writing style and techniques.

SKILLS

- **Mathematical Knowledge:** Pre-Calculus, Calculus, Linear Algebra, Elementary Graph Theory, Elementary Number Theory, Probability and Statistics, Mathematical Analysis
- **Programming Languages:** C, C++, Python, R, Lua
- **Database Systems:** PostgreSQL
- **Data Science & Machine Learning (beginner):** R tidyverse packages, python libraries: pytorch, scikit-learn, scipy, matplotlib, pandas, scipy, beautifulsoup4
- **DevOps & Version Control:** Git, Cmake, Docker
- **Language Knowledge:** Azerbaijani (Native), English (C1), French (B1)
- **Other Tools & Technologies:** Latex, Linux (arch and debian based), Microsoft Excel, RStudio, Vim/Neovim

CONTESTS, AWARDS AND OTHER ACTIVITIES

- **CodeForces Competitive Programming Contests**

May 2024 - Since

Practicing Competitive Programming skills periodically



- Currently learning new algorithm concepts and data structures and implementing them in a quick manner competitively.

- **Azerbaijan Olympiads blogger**

April 2022 - September 2022

Art of Problem Solving Forum



- Archived Azerbaijan olympiad TSTST, TST and other problems for various national and international olympiads such as Azerbaijan Senior National Olympiad, Juniors' and Seniors' Balkan Mathematical Olympiad and International Mathematics Olympiad.
- Discussed about the hard questions and their solutions.

- **Azerbaijan Mathematical Selection Tests Participant**

September 2021 - June 2022

Azerbaijan TST for famous mathematical olympiads such as IMO, BMO, and JBMO

- Developed complex analytical and mathematical skills
- Used mathematical proof techniques such as proof by contradiction, induction and construction
- Learned and understood tricky Combinatorics and Number Theory theorems

- **Azerbaijan Juniors' Mathematics Camp Participant**

September 2021 - June 2022

Azerbaijan olympiad camp for training individuals for famous mathematical olympiads such as IMO, BMO, and JBMO

- Collaborated with peers to solve challenging mathematical problems
- Participated in intensive training sessions, improving problem-solving strategies and critical thinking abilities
- Mastered proper mathematical proof skills.

- **"World Star" Gold Award Winner**

Finals 2021-2022

Thailand International Mathematical Olympiad



- **Gold Award Winner**

2021-2022

Singapore and Asian Schools Math Olympiad

