Alnur Alimanov

LinkedIn | GitHub | Istanbul, Türkiye

2+ years of experience in Deep Learning, Machine Learning, Python programming, and Computer Vision. Developed several novel deep learning models for medical image enhancement, super-resolution, segmentation, and generation. Published corresponding research works in international conferences and journals for such countries as the United States of America, Germany, Indonesia, and Turkey. Experience in C++, C#, HTML, CSS, and JavaScript programming.

Skills: C++ | Python | C# | HTML | CSS | JavaScript | Git | CMake | Docker | SQL | Deep Learning | Machine Learning | PyTorch | TensorFlow | Web scraping | Databases | Research and Development | English (C1) | Turkish (C2) | Russian (C2)

Certificates and Awards

- International Information Technologies University: Full scholarship.
- Bahçeşehir University: Full scholarship from TÜBİTAK.
- Applied Data Science with Python: **Credential**.
- Learning C++: **Credential**.
- C++ Essential Training: **Credential**.
- C++ Templates and the STL: **Credential**.
- Unity 2023 Essential Training: **Credential**.
- Introduction to Career Skills in Software Development: **Credential**.
- Programming Foundations: Fundamentals: **Credential**.
- Programming Foundations: Beyond the Fundamentals: **Credential**.
- Career Essentials in Software Development by Microsoft and LinkedIn: **Credential**.
- Programming Foundations: Databases: **Credential**.
- Succeeding in Web Development: Full Stack and Front End: **Credential**.

Projects

- A desktop client-server application for safe instant messaging in C++.
  The application consists of a server and a client that includes such features as end-to-end encryption/decryption, SQL database storage, GUI, concurrency, and asynchronous communication over TCP in real time. Server, Client.
- A desktop file manager in C++.
  A fast and simple cross-platform GUI application for Linux and Windows systems. GitHub.
- A desktop task manager in C++ and Qt.
  A simple cross-platform GUI application for Linux and Windows systems with SQLite support. GitHub.
- A web planner application in HTML, CSS, JavaScript, and Python.
  A web application that runs locally using Python server for storing tasks and plans. GitHub.
- Task manager console application in C++.
  A simple console application for storing tasks locally. GitHub.
- Self-driving car simulation with Python, TensorFlow and Keras.
  A deep learning model trained to control a car in the Udacity car simulation. GitHub.
- Web-scraping application for SteamDB with Python in a Docker container.
  A web-scraping application for SteamDB that notifies over email if there are available discounts for selected games with Selenium, a browser automation library for Python, inside a Docker container. GitHub.
- Rock, Scissor, Paper simulation with Odin programming language.
  A console-based simulation with a search algorithm for decision making. GitHub.
- An image captioning deep learning model.
  A vision transformer deep learning model for image description/captioning in Python and PyTorch. GitHub.

Work experience

TÜBİTAK, state research organization	*03/2022 - present*

Artificial Intelligence Researcher
- Developed novel state-of-the-art Deep Learning models.
- Published research works at several international conferences in the United States, Indonesia and Turkey, and a scientific journal in Germany.
- Developed a lightweight state-of-the-art Denoising Diffusion Probabilistic Model for medical image generation.
- Developed an extensive medical image segmentation dataset for images of retina with over 30,000 images.

Published works:
- "Retinal Image Restoration and Vessel Segmentation using Modified Cycle-CBAM and CBAM-UNet" (2022 Innovations in Intelligent Systems and Applications Conference). DOI. GitHub. arXiv.
- "Retinal Image Restoration using Transformer and Cycle-Consistent Generative Adversarial Network" (2022 The International Symposium on Intelligent Signal Processing and Communication Systems). DOI. GitHub. arXiv.
- "A Hybrid Approach for Retinal Image Super-Resolution" (Visual Computing for Industry, Biomedicine, and Art Journal). DOI. GitHub.
- "Denoising Diffusion Probabilistic Model for Retinal Image Generation and Segmentation" (2023 International Conference on Computational Photography). DOI. GitHub. arXiv.

Home Credit Bank, international bank	*10/2020 - 03/2021*

SQL Data Analyst intern
- Completed in the top 3 out of 100 interns.
- Learned SQL and data analysis.
- Worked on database management of the bank's transactions.

Education

Bahçeşehir University
- MS of Artificial Intelligence (2021 – 2024)
- GPA: 3.84

International Information Technologies University
- BS of Mathematical Engineering (2017 – 2021)
- GPA: 3.36