Artur SOGOMONYAN

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EDUCATION

Data Science — *Master of Science* 2022 - NOW
Technische Universität Wien, Austria

Information technologies and telecommunications — *Bachelor of Science* 2014 - 2020
Bauman Moscow State Technical University
Diploma thesis "3D printer failure detection system based on computer vision detection"

Deep Learning — *Deep Learning School* 2020 - 2021
Moscow Institute of Physics and Technology

Machine Learning — *School of Data Analysis* 2020 - 2020
Higher School of Economics University and Yandex

WORK EXPERIENCE

Data Scientist in Project Rail4Future — *Technische Universität Wien* FEB 2024 - JUL 2024
- Analyzing rail irregularities, refactoring and optimization of the LSTM models. Working with industrial partners Siemens and ÖBB.
- Performed significance tests, achieved robustness, and dramatically improved the performance of the model.

CTO, Data Scientist — *susteam* JAN 2023 - PRESENT
- Architecture and Full Stack development of the ESG system.
- Developed a pipeline with OCR, information retrieval, Data Analysis and Machine Learning. RAG implementation for LLMs.
  FastAPI, Amazon Web Services (AWS), Amazon EC2, S3, React.js, Bert, LLama3

Machine learning analyst — *GLOSAV* FEB 2021 - JUL 2021
- Engineered a sophisticated algorithm to detect railway routes with object detection and tracking mechanisms. Developed a robust way to track obstacles on the rails. Achieved good performance and latency for real time stream less than 5ms.
- Contributed to the design and implementation of an expansive microservice architecture of the train autopilot system.
  Python, YOLOv5, OpenCV, NumPy

Project Manager, 3D-Modeller, Software Engineer — *Arterra Miniature* FEB 2020 - MAR 2021
- Working with customers, 3D visualization, prototyping, 3D- printing, programming microprocessors and microcontrollers, work from scratch to delivery of projects.
  Blender, Cura, Arduino

Frontend Developer — *KRK Group* SEP 2019 - DEC 2019
- Developed corporate educational platform, React application, implementation of user interface, communication with databases.
  JavaScript, React

Full-Stack Developer — *Linwood* AUG 2018 - SEP 2019
- Implemented all stages of the online store development, subsequent testing, promotion and expansion of functionality for the required business tasks.

Web developer — *Freelance* MAR 2017 - AUG 2018
- arried out projects, as Front-end and Back-end. Implemented from scratch or refactored existing solutions for functionality extensions.
  PHP, Yii2, html, scss, Python, Django

PROJECTS AND AWARDS

Tourism Technology Hackathon — *2nd Place Winner* NOV - 2023
- Implemented a data pipeline mapping the data from different sources and building a knowledge graph for the different tourism subjects. The result I visualized as an interactive map with the chat bot, that could wrangle the the point of interest and conclude the insights of the analysis.
 Selenium, geoandas, folium

Coding Austria — *Lip Reading app at Hackathon*   Jul - 2023

- Utilized Audio-Visual Hidden Unit BERT model for lips reading task for the Austrian Red Cross challenge.
- Integrated the model into the web app, passing the video stream from the smartphone to the model, reading the lips and generating a text passed as a message to the chat.
- This application allowed the Red Cross team to communicate in a very noisy environment, when it is not possible to use walkie-talkies.

AV-HuBERT, FastAPI, Next.js

Skills

Software Development	Machine Learning	Databases and Cloud	Languages
• docker	• scikit-learn	• Git	• English (C1)
• Python	• Pandas	• PostgreSQL	• German (A2)
• C++	• NumPy	• MongoDB	• Russian (C2)
• R	• Tensorflow	• Redis	• Armenian (B2)
• Django	• PyTorch	• RabbitMQ	
• Flask	• OpenCV	• nginx, Gunicorn	
• FastAPI	• YOLO	• Spark	
• JavaScript	• NLTK, SpaCy	• AWS EC2, S3	
• React, Svelte	• Bert, LLama3, GPT		