AYDIN JAVADOV

M.Sc student at Technical University of Munich

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📍 Am Oberwiesenfeld 9, 2.31 , Munich, Germany

EXPERIENCE

Artificial Intelligence Working Student
BMW Group

📅 Apr 2023 – Present   📍 Munich, Germany

Focusing on: Large Language Models, Explainable AI, Time Series Analysis and Signal Processing, Data Analytics

Master Thesis:
Explainable AI in Deep Clustering Algorithms
BMW Group

📅 Oct 2022 – Apr 2023   📍 Munich, Germany

Technologies: Python, Pytorch, AWS, Git
Graded: 1.0 (German System)

Guided Research:
Explainable AI for clinical decision support in dermatology
Technical University of Munich,
Chair of Computational Imaging and Inverse Problems

📅 Apr 2022 – Nov 2022

The subject of this project is the understanding and implementation of several interpretability techniques for deep learning models for skin lesion classification. The results of this project will be presented to human physicians for analysis.

Data Science Working Student
novuter GmbH

📅 September 2021 – May 2022 📍 Munich, Germany

- Extracted raw data and transformed the data stories on different domains (marketing, operations, finance, products) to identify key metrics suggesting actions for clients to optimize the decision making.
- Managed Exasol and PostgreSQL databases and checked data quality with the QA team.
- Created business related data stories for Digital Assistant in www.novuter.com with SQL

Technologies: PostgreSQL, ExasolSQL, JavaScript, Python, HTML, CSS

Artificial Intelligence Intern
ATL Tech - AI Lab

📅 Oct 2019 – Feb 2020   📍 Baku, Azerbaijan

- Took part in the Advanced research of Speech recognition in Dialog Systems for Azerbaijani Language
- Worked on project to extract and clean speach data from a given URLs in automated way

Technologies: Python, pandas, numpy

Artificial Intelligence Intern
Idrak Technology Transfer

📅 June 2019 – Sept 2019   📍 Baku, Azerbaijan

- Dealt with Computer Vision, Image Processing and Image Recognition tasks using Artificial and Convolutional Neural Networks.
- Worked on Multi-Class image detection project

Technologies: Python, Tensorflow, Keras, numpy

Mars Academy- Engineering, Robotics and Programming instructor
Mars Academy

📅 August 2018 – August 2019

- Taught Python to primary and high school students.
- Taught basic Engineering techniques concerning Arduino UNO.

Technologies: Python, Arduino UNO, Lego Mindstorms EV3

EDUCATION

M.Sc in Data Engineering & Analytics
Technical University of Munich

📅 April 2021 – Present

B.Sc (Exchange Student) in Computer Science
Korean Advanced Institute of Science and Technology

📅 Feb 2018 – June 2018

B.Sc in Computer Engineering
ADA University

📅 Sept 2016 – June 2020

Graduated with Honors Diploma

AWARDS & PARTICIPATIONS

- 1st Place in HackaTUM Hackathon
  Technical University of Munich
  📅 November 2021

- Magna Cum Laude Honor and Diploma of distinction for graduation
  ADA University
  📅 August 2020

- Dean's List of Honour and Merit-Based Scholarship
  ADA University
  📅 January 2020

- Rector's List of Honour and Merit-Based Scholarship named after Lotfi Zadeh
  ADA University
  📅 October 2019

- Head Jury Certification at First Lego League (FLL) Competition
  Ministry of Education of Azerbaijan Republic
  📅 April 2019

- Volunteer Organizer of 'Purple Comet' International Math Olympiad
  ADA University
  📅 April 2019

- Dean's List of Honour and Merit-Based Scholarship
  ADA University
  📅 January 2019

- Lego Official Trainee
  Lego Education
  📅 February 2019

- Global Korea Scholarship
  Ministry of Education of Korea Republic
  📅 February - June 2018

- Rector's List of Honour and Merit-Based Scholarship
  ADA University
  📅 January 2018

- Dean's List of Honour and Merit-Based Scholarship
  ADA University
  📅 May 2017

PUBLICATIONS

- "Approximation of CIEDE2000 color closeness function using Neuro-Fuzzy networks", Applied Intelligence, Volume 51
  https://link.springer.com/article/10.1007/s10489-021-02326-1
- (2019) The Playground, Math Horizons, 27:1, 30-33,
  DOI:10.1080/10724117.2019.1629214

TECHNICAL SKILLS

Python · Java · Deep Learning · Computer Vision · NLP · Time Series · Statistics · AI for Medicine · Signal Processing · Machine Learning · Cloud computing · Azure · AWS · R · PowerBI · Javascript · pyTorch · Oracle/PL SQL · openCV · MATLAB · PostgreSQL · Git · Distributed Systems · Business Analytics · Uncertainty Quantification

LANGUAGES

Azerbaijani (native), Turkish (native), English (fluent), Russian (fluent), Korean (elementary), German (beginner)

PROJECTS

- Guided Research:
  Explainable AI for clinical decision support in dermatology
  **Technical University of Munich,
  Chair of Computational Imaging and Inverse Problems**
  📅 Apr 2022 – Nov 2022

  The subject of this project is the understanding and implementation of several interpretability techniques for deep learning models for skin lesion classification. The results of this project will be presented to human physicians for analysis.

- (winner) HackaTUM:
  **Technical University of Munich
  & Carl Zeiss AG (ZEISS)**
  📅 Nov 2021

  Machine Learning and Software Engineering solution to offer the domain experts a tool to visualize the temperature data as well as detect and predict temperature fluctuations in microscopic data. The project selected as winner. More Info here: https://devpost.com/software/munichdortmund#

- Bachelor Thesis Project:
  Advanced Research in Analytics with Machine Learning and Data Visualization of DTS Data of British Petroleum
  ADA University

  📅 Jan 2020 – Jun 2020

  Dealt with data analytics, anomaly detection using several machine learning techniques (One-Class SVMs, Isolation Forests), time series analysis, interpolation techniques, and other various 3D visualizations.
  A fairly small portion of the work was published (see the link for pdf version (page: 463)):
  https://www.bhos.edu.az/kcfinder/upload/files/Tezisler_2020.pdf

- Practical Course Project:
  Explainable AI for Controllable Text Generation for German Language
  Technical University of Munich

  📅 Oct 2022 – Mar 2023

  Motto & Motivation: To generate a simplification that best fits the user's needs, it can be important to adapt the amount or strength of simplification. Moreover, the user might highlight important passages that must be considered. In this project, we want to explore how control mechanism can be included into German simplification models.

- Practical Course Project:
  Machine Learning in Crowd Modeling & Simulation
  Technical University of Munich

  📅 Oct 2023 – Feb 2024

  Motto & motivation is to learn about the core mechanics in human movement and interactions in crowds. The current state of the art in mathematical modeling has been be discussed along with practical exercises. As a reference, the crowd simulation software VADERE (www.vadere.org) is introduced. After this introduction to modeling of crowds, current machine learning approaches are discussed to analyze the simulated results, as well as experimental data. Techniques from statistics, dynamical systems theory, manifold learning, and numerical analysis are be introduced in short lectures, implemented by the students.