Hrayr Muradyan

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RELEVANT SKILLS

Hard Skills: PyTorch, Tensorflow, Scikit-learn, Git, Matplotlib, Selenium, AWS, Spark, OOP, OpenCV, SQL, CI/CD, Python, R, Machine Learning, Statistical Analysis, Deep Learning, Neural Networks, Computer Vision, Data Visualization, Data Analytics.

Soft Skills: Leadership, Safety Mindset, Communication, Collaborative skills, Team player.

WORK EXPERIENCE

Data Scientist

HCL Technologies – Vancouver, BC, Canada (Hybrid)   *Apr 2025 – Present (Ending Jun 2025)*

- Collaborating with senior HCL Technologies professionals and university supervisors (Joel Ostblom and Ilya Musabirov) on a capstone project focused on automating incident management.
- Using automatic information retrieval approach to extract relevant historical incidents' resolutions for new incidents.
- Applying large language models (LLMs) to generate context aware resolution suggestions.
- Evaluating different top large language models for incident resolution and providing reports about the results.

AI Content Creator

YouTube – Vancouver, Canada   *May 2024 – Present*

- Founder & Creator of an AI-focused YouTube channel (AI For Beginners), simplifying complex concepts with engaging visuals. Rapidly expanding, showcasing expertise in AI communication and content strategy.
- 15.4k+ subscribers, 265k+ total views, 99%+ like ratio with 28 videos showing strong audience engagement and efficient planning.
- Built and grew the channel in a highly competitive niche while managing full-time studies and part-time work.

Machine Learning Researcher

ServiceTitan – Yerevan, Armenia (Remote)   *Sep 2024 – May 2025*

- ServiceTitan is a unicorn SaaS company headquartered in US, Los Angeles, powering home service businesses.
- Conducting literature review on sales pitch generation using Large Language Models. Applying advanced Prompt Engineering techniques and domain-specific knowledge to craft persuasive sales arguments using ChatGPT API.
- Implementing RAGs, specifically Nearest Neighbours Search, to extend and generate better sales proposals. Enhanced the proposal quality by reducing the custom evaluation metric's median score from 11 to 4.
- Trained a regression model to predict the optimal length of the proposal which improved the MAE score by ~40%.
- Performing data analysis, visualizations and evaluation of generations to understand future directions.

Research Assistant / Data Scientist

American University of Armenia – Yerevan, Armenia (Remote)   *Aug 2024 – Dec 2024*

- The aim of the research was to study the effect of detergents on the level of different chemicals in Lake Sevan.
- Processed all the raw data including cleaning and variable engineering.
- Conducted exploratory data analysis, identified patterns through summary statistics, reports, and visualizations.
- Currently combining the findings into a manuscript with plans for submission to a peer-reviewed journal.

Artificial Intelligence Engineer

Activeloop – California, United States (Remote)   *June 2024 – Sep 2024*

- Modified the code of MusicGen by Meta AI to run the training pipeline using Deep Lake. Find the repo here.
- Collected Armenian Music Dataset, labeled, preprocessed and prepared it for training.
- Fine-tuned the model for Armenian Music Generation using Deep Lake Vector Store and wrote a blog about the step-by-step process. The blog is published here.

Machine Learning Engineer

Philip Morris International – Yerevan, Armenia   *May 2023 – Apr 2024*

- Hired by a university professor to work in a team of three on an end-to-end machine learning project, as a result of excelling in machine learning course at AUA.
- Collected, cleaned, and pre-processed sound data for model training. Extracted features from the sound using Fourier Transformation and trained a neural network model for detecting whether an IQOS stick is original or fake.
- In Sep 2023, submitted two reports that were both accepted and were presented to PMI research center in Switzerland.

Machine Learning Engineer
CAREAWARE – Yerevan, Armenia   *Oct 2022 – May 2023*

- Worked on a robot arm trajectory optimization project by Gerhard Schubert. Designed custom LSTM model that improved the result by 50%.
- Was the leader of a small team working on an end-to-end vision based Fall Detection project from scratch using OpenCV, PyTorch and other libraries.
- Worked on "kick detection for smart trunk opening" project by Intive for smart trunk opening, did visualizations, collected data and developed real-time data labeling techniques using OpenCV for faster and productive data labeling.

EDUCATION

Masters in Data Science | University of British Columbia (UBC) (In Progress)   09/2024 – 07/2025 **(GPA 4/4)**

Coursework: Computing Platforms for DS, Programming for DS, Probability and Statistics, Data Manipulation in R, Supervised Learning 1, Statistical Inference 1, Algorithms and Data Structures, Data Visualization, Data Science Workflows, Databases and Data Retrieval, Feature Engineering and Model Selection, Linear Regression, Collaborative Software Development, Communication and Argumentation, Supervised Learning 2, Regression 2, Unsupervised Learning, Data Visualization 2, Bayesian Statistics, Spatial and Temporal Models. Web and Cloud Computing, Experimentation and Causal Inference, Privacy, Ethics, and Security, Advanced Machine Learning, Capstone.

BS in Data Science | American University of Armenia (AUA)   09/2020 – 09/2024 **(GPA 3.7/4)**

Coursework: Calculus (Single- and Multi-Variable), Discrete Mathematics, Programming for Data Science, Data Structures/Algorithms in Data Science, Probability, Linear Algebra and Ordinary Differential Equations, Numerical Methods, Databases and Distributed Systems, Statistics, Data Visualization, Business Intelligence, Artificial Intelligence, Statistics 2, Machine Learning, Bayesian Statistics, Marketing Analytics, Business Analytics, Time Series Forecasting, Computer Vision, Capstone.

PROJECTS

DSA Problems and Solutions (Personal, Ongoing) – This repository is used for practicing Data Structures and Algorithms (DSA) problems.

Summarease (UBC, 03/02/2025) – Includes all components of a complete end-to-end package development using poetry and cookiecutter involving documentation, function tests, code coverage, ci/cd, and collaboration. Grade A+.

Airline Customer Satisfaction Prediction (UBC, 16/12/2024) – Includes all components of a complete end-to-end machine learning project consisting of Docker image, full documentation, function tests, and collaborative work. Grade A+.

Armenian Music Generation (AUA Capstone Project, 20/05/2024) – Fine-tuned MusicGen developed by Meta AI with an efficient implementation for Armenian Music Generation encompassing data collection, data preparation and paper writing. Find the final paper here. Final grade 98.6/100.

Age and Gender Prediction From Images (AUA, 09/12/2023) – Fine-tuned "fairface" model's weights to predict age (+/- 5 years) and gender (96% accuracy) of a person from the face image. Made a well-received presentation which got 100/100 marks.