

Khachatur Dallakyan

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EDUCATION

Karolinska Institute, Stockholm University	Sweden
Joint Master's Programme in Health Informatics	2024-2026 (expected)
Awards: The Swedish Institute Scholarship for Global Professionals	
The Chinese University of Hong Kong	Hong Kong
Bachelor of Sc. in Artificial Intelligence: Systems and Technologies (GPA: 3.29 / 4.00)	2020-2024
Awards: Second class upper division with Honours, Belt and Road Scholarship	
International Baccalaureate Diploma Programme at Quantum College	Armenia
Total points: 37/45	2018-2020
Subjects: Mathematics, Computer Science, ITGS, Armenian, Economics, English HL.	

RESEARCH AND WORK EXPERIENCE

Analyzing Spetio-Temporal Development of the Enteric Nervous System (ENS)	2025
Main objective of the research is to find spetio-temporal differences for ENS cells, namely progenitors, neuroblasts and SCPs between regions and timepoints.	
<ul style="list-style-type: none">Finetuned various foundation models (scGPT, cell2sentence) with custom learning objectives to create region and timepoint classifiers.Utilizing the attention architecture to study gene-to-gene relations in various clusters.	
Biopsy QR Code Management System	2025
<ul style="list-style-type: none">Developed biopsy management system for Freiburg's medical center.	
Benchmarking Single Cell Foundation Models (FM) for Retrieval	2024-2025
Benchmarking traditional methods and FMs across diverse biological tasks.	
<ul style="list-style-type: none">Benchmarked retrieval accuracy, diversity, biomarker identification and novel cell type detection.Benchmark FMs include scGPT, Geneformer, scMulan, UCE, SCimilarity, scFoundation.	
Prediction of Cellular Morphology with Image-to-image Translation Models	2023-2024
<ul style="list-style-type: none">To benchmark MorphDiff established baseline using the DMIT and DRIT++ models.Adapted the model architectures to process 5 channel cellular morphology imaging data.	
Internship at Centre for Perceptual and Interactive Intelligence (CPII)	2023
AI research company targeting sectors of healthcare, urban services, and reindustrialization	
<ul style="list-style-type: none">Developed a prototype for speech-based interaction with LLMs without relying on ASR or TTS.Utilized speech representations from Hubert pretrained model to finetune LLAMA.	
Internship at ONEFi (iPYGG)	2022
Fintech company aiming to connect Asia-Pacific banking into a single application.	
<ul style="list-style-type: none">Developed ML models for transaction classification and description summarization.	

EXTRACURRICULAR ACTIVITIES

Videogame modding	2024
<ul style="list-style-type: none">Modified WW2 resource trading algorithm for AI to prioritize historical allies with Lua.	
Armenian Red Cross Society (ARCS)	2019-2020
<ul style="list-style-type: none">Volunteered as part of the "Social Support and Health Care" team.	
Global Innovation Forum	2019
<ul style="list-style-type: none">Volunteered for GIF during Aurora Humanitarian InitiativeHelped to organize a talk about the scientific computing framework Torch and its use cases.	
Competitive programming	2017-2019
<ul style="list-style-type: none">Codeforces: https://codeforces.com/profile/khachdallakDeveloped and tested competitive programming problems for Armenian SPOJ.	

ACHIEVEMENTS

The Swedish Institute Scholarship for Global Professionals	2024
<ul style="list-style-type: none">Awarded for demonstrated academic excellence and strong leadership potential.	
CUHK Data Hack 2024	2024
<ul style="list-style-type: none">Champion team during the Data Solutions for Social Good Hackathon.Implemented random forest algorithm for early detection and prevention of drug abuse.	
“Belt and Road” scholarship	2020
<ul style="list-style-type: none">Scholarship for outstanding new students from the Belt and Road Region countries.	
“Best student” state prize	2018
<ul style="list-style-type: none">Republic of Armenia State Prize in Information Technologies.	
“Algorithmization Methods” Programming Contest	2017
<ul style="list-style-type: none">Second and third places (top 0.5%) in Autumn and Winter Cup contests respectively.	