

Artavazd Maranjyan

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Education

- **Ph.D. in Computer Science** **Thuwal, Saudi Arabia**
2023 – Present
King Abdullah University of Science and Technology (KAUST)
Advisor: Peter Richtárik
- **M.Sc. in Applied Statistics and Data Science** **Yerevan, Armenia**
2021 – 2023
Yerevan State University
■ Thesis: On local training methods,
co-supervisors: Peter Richtárik, Mher Safaryan
- **B.Sc. in Informatics and Applied Mathematics** **Yerevan, Armenia**
2017 – 2021
Yerevan State University
■ Thesis: On the Convergence of Series in Classical Systems,
supervisor: Martin Grigoryan

Experience

- **Researcher in the group of Martin Grigoryan** **Yerevan, Armenia**
April 2023 – Aug 2023
Yerevan State University
 - Studied the existence and properties of universal functions with respect to the Vilenkin and Haar systems across various functional spaces.
- **Machine Learning Researcher** **Yerevan, Armenia**
March 2023 – Aug 2023
YerevaNN
 - Worked on the intersection of Federated Learning and Optimization.
- **Internship in the group of Peter Richtárik** **Thuwal, Saudi Arabia**
June 2022 – Jan 2023
King Abdullah University of Science and Technology (KAUST)
 - Worked on the "GradSkip: Communication-Accelerated Local Gradient Methods with Better Computational Complexity" paper.
- **Machine Learning Researcher** **Yerevan, Armenia**
Jan 2022 – June 2022
YerevaNN
 - Worked on the intersection of Federated Learning and Optimization.
- **Co-Founder** **Yerevan, Armenia**
July 2021 – June 2022
OnePick

OnePick is an emerging startup that provides up-to-date and customized social media posts based on page and market data analysis.

 - Winner idea of InVent 2.0 [certificate] venture building program organized by FAST.
- **Backend Developer** **Yerevan, Armenia**
July 2021 – Sep 2021
EXALT Technologies Ltd.
 - Worked for Nutanix.
- **Machine Learning Research Engineer** **Yerevan, Armenia**
June 2021 – July 2021
Foundation for Armenian Science and Technology (FAST)
 - Worked on Fraud detection.
 - Made data-driven forecasts using machine learning algorithms and statistical models

Software Engineer in Test

Yerevan, Armenia

Sep 2019 – Jan 2021

Picsart

- Worked with automation team to design and develop automated solutions across several mobile/web applications.
- Worked directly with software developers, test engineers, product owners, business analysts to find and resolve issues.
- Worked closely with DevOps to suggest improvements in processes and in Jenkins Continuous Integration cycle.

Awards

Dean's Award

Thuwal, Saudi Arabia

Sep 2023 - Sep 2026

King Abdullah University of Science and Technology (KAUST)

Awarded to a few top students accepted to KAUST (6000\$ annually for 3 years).

Outstanding Final Project Award

Yerevan, Armenia

Yerevan State University

May 2021

Recognized for the Bachelor's thesis (awarded to 6 students among 250+ students).

Papers

Menshov-type theorem for divergence sets of sequences of localized operators

Martin Grigoryan, Anna Kamont, Artavazd Maranjyan

Journal of Contemporary Mathematical Analysis, vol. 58, no. 2, pp. 81–92, 2023.

GradSkip: Communication-Accelerated Local Gradient Methods with Better Computational Complexity

Artavazd Maranjyan, Mher Safaryan, Peter Richtárik

arXiv:2210.16402, 2022

On the divergence of Fourier series in the general Haar system

Martin Grigoryan, Artavazd Maranjyan

Armenian Journal of Mathematics, vol. 13, p. 1–10, Sep. 2021.

On the unconditional convergence of Faber-Schauder series in L^1

Tigran Grigoryan, Artavazd Maranjyan

Proceedings of the YSU A: Physical and Mathematical Sciences, vol. 55, no. 1 (254), pp. 12–19, 2021.

Talks

"GradSkip: Communication-Accelerated Local Gradient Methods with Better Computational Complexity"

Mathematics in Armenia: Advances and Perspectives [slides] [abstract]

Yerevan, Armenia, July 5, 2023

"GradSkip: Communication-Accelerated Local Gradient Methods with Better Computational Complexity"

Machine Learning Reading Group Yerevan [video (Armenian)]

Yerevan, Armenia, March 10, 2023

"GradSkip: Communication-Accelerated Local Gradient Methods with Better Computational Complexity"

Federated Learning One World Seminar (FLOW) [video]

Online, December 7, 2022

"ProxSkip: Yes! Local Gradient Steps Provably Lead to Communication Acceleration! Finally!"

Machine Learning Reading Group Yerevan

Yerevan, Armenia, April 10, 2022

Skills

- Algorithms and Data Structures [certificate],
- Python, Java, R,
- Numpy, Pandas, Matplotlib, Scikit-learn,
- PyTorch, Tensorflow,
- Languages
 - English: Proficient,
 - Russian: Proficient,
 - Armenian: Native

Hobbies

Dancing (bachata, salsa, kizomba), climbing, snorkeling, table football (foosball), board games.