Liana Isayan

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Work Experience

Jul-2022 - current   Data Scientist, *Aarki (Division of Skillz Inc.)*

- *Prepared offline multi-armed bandit models (used policies: TS and UCB) for selecting best creatives to be shown to users - 15% performance improvement (metric: cost per install).*
- *Participated in the preparation, performance analysis and roll-out support of the new DFM (deep factorization machine) models.*
- *Feature engineering and implementation for BLR and LGBM models in production (used in retargeting campaigns predictions)..*
- *Participated in the preparation, training, debugging and performance analysis of 3-stage (install*purchase*revenue) user-response model to be used for one of the biggest accounts.*
- *Conducted in depth analysis for models post and pre, features importances and models' calibration analysis.*
  - ✔ *Applied methods: SHAP, LIME, PD plots, PCA, users segments clustering, frequent pattern analysis, dashboards, simple groupings and visualisations*
- *Implemented possible impact assessment analysis (i.e. on users click through rate, install/purchase behavior, etc.), conducted A/B tests and made post-implementation results analysis for the new product features.*
  - ✔ *Applied methods: Bayesian A/B testing, trend and seasonality decomposition, outlier detection models, survival and behavioral analysis of users, ensemble trees for users classification, correlation analysis, etc.*
- *Provided multiple knowledge share sessions for nearly 50 account analysts*
  - ✔ *Eg. on Python/Jupyter notebook/SQL best practices, ML models work logic, newly implemented features description and usage guidance*
- *Data monitoring scripts preparation to capture wrong campaign setups and/or other model or campaign related issues.*

Senior Analyst, Deep Dive   Data Scientist

Nov-2016 – Jul-2022   Senior Analyst, MI and Business Intelligence Center, *"Ameriabank" CJSC*

- *Monthly report on the macroeconomic situation of the Republic of Armenia (Power BI)*
  - ✔ *Applied methods: Nelson-Siegel – yield curve estimation, Hodrick-Prescott filtering, SARIMAX forecasting and Intervention analysis, OLS and Panel regression models, classification, networks analysis, etc.*
- *Monthly report on the bank's actual vs budget figures*
  - ✔ *Applied methods: Factor/contribution analysis, Network/graph analysis and ranking (Perron-Frobenius theorem, FTP and Cost allocation processes between the teams, etc.)*
- *Analysis of the effectiveness of different business directions, separate services, and markets; if necessary, presentation to beneficiaries and governing bodies*
  - ✔ *Applied methods: Survival analysis - predicting time (months) after tariffs change to result in customers' cash-out behavior change, Prophet method forecasting - predicting # and amount of transactions, J score indexing - ranking best POS terminals and ATMs, ranking competitors, classification of customers into strategic and tactical groups, queue management system analysis, etc.*
- *Materials for the bank's strategy discussions, annual, semi-annual reports, etc.*

Intern (GA6)   OPs junior specialist   OPs specialist   Analyst   Senior Analyst

Education

Institution name	Yerevan State University
Department	Mathematics and Mechanics
Specialization	Applied Statistics and Data Science
Educational level	

2021 – 2023	Master's degree
	<u>Thesis topic:</u> "Multi-Armed Bandit Problem for Mobile advertising" Grade: 20/20

<u>Completed courses:</u> Applied statistics (R), Basic Math, Probability, Optimization, Econometrics I, Python I, Bayesian Statistics, Time Series, Data Mining, Data Visualization, Big Data, ML I, Python II, Deep Learning, ML in Healthcare, Computer Vision, NLP, ML II, MLOps

Institution name	Armenian State University of Economics
Department	RE & IER
Specialization	Theory of Economics
Educational level	

2019 – 2022	PhD student
	<u>Dissertation:</u> "Problems of interaction between social capital and economic growth (by the example of RA)"

2017 – 2019	Master's degree *Cumulative GPA* 99.68/100
	<u>Thesis topic:</u> "Institutional prerequisites of economic growth"

2013 - 2017	Bachelor *Cumulative GPA* 98.79/100
	<u>Thesis topic:</u> "Theoretical concept of behavioral finance"

Nominal scholarships winner named after M. Kotanyan (to the best student of the faculty), 2016-17

Hard Skills

MS office, Power BI (*familiar with* DAX and M), Eviews, AS bank, R language (dplyr, ggplot2, igraph, etc.), Python (Pandas, Numpy, Matplotlib, Scikit-Learn, etc.), Bloomberg terminal, SQL, Clickhouse, MongoDB, Redash, Looker, Aerospike, Graphana PySpark, Amazon S3, Git, Gitlab, Youtrack, Domo, SPSS, MetaTrader, HTML-CSS-JS, React

Languages

Armenian – Excellent (native), Russian – Good, English – Excellent

Other

- Lecturing at Armenian State University of Economics, Sep-2022 – Feb-2024
  ◦ Subjects: Behavioural Economics, Introduction to Microeconomics, Introduction to Macroeconomics, Macroeconomics 1, History of Economic Thought
- The Data Science Course 2021: Complete Data Science Bootcamp (statistics, probability, Python, etc. - ongoing), Udemy, 2021
- Financial modeling & valuation analyst (FMVA certification), 2021
- Research group member, "Amberd" Research Center, ASUE, Oct-2018 - Apr-2020
- "Oikonomia/Hoikonomia" wordpress blog was created: https://hoikonomia.wordpress.com/, Participation in the Y Combinator Startup School, 2018
- Java Script, React JS lessons, Innovative Solutions and Technologies Center – ISTC (certificate), 2017
- Research assistant, "Amberd" Research Center, ASUE, May-2016 – Jul-2017