

Giorgi Gachechiladze

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objective

Principal-level full-time remote or on-site position as a Data Architect or ML Cloud Platform Engineer.

professional experience

Space International in Tbilisi, Georgia

Data Architect • Dec 2023 - Present

Design and implementation of a robust cloud-native hybrid Data Platform suited for stringent data residency regulations while utilizing cutting-edge Lakehouse architecture. Deployment and adoption of modern ML lifecycle tools and paradigms. Performance monitoring and optimization of data products. Evaluation of modern data ecosystem and formation of Data Strategy.

Bank of Georgia in Tbilisi, Georgia

Senior Data Scientist • Aug 2022 - Dec 2023

Solution architecture and server deployment for real-time contextual recommendation engine. Research and application of on-prem and remote Large Language Models in non-financial context. Design and maintenance of awesome streamlit internal apps and dashboards. RCT experiment design and hypothesis testing. Geospatial data clustering and anomaly detection. GCP and OpenAI integration.

Software Engineer • May 2016 - Jul 2017

Gained a general understanding of core banking ins and outs with financial and technical details during an intensive internship. Tackled numerous engineering and algorithmic problems using various techniques on a range of platforms. Joined the Digital Channels Unit as a full-time software engineer primarily focused on Web and Android app development. Led and collaborated the development of several web apps of varying sizes. Aided in the launch of the first BOG mobile app on Android.

Freelancer Remote

Software Engineer • Dec 2013 - June 2021

Developed web applications in PHP and JavaScript, integrating with the Instagram and Facebook Graph APIs for image processing and curation, and crafted a dynamic RSS reader with a tabbed UI, filters, and search features. (Javascript, PHP, Laravel, RSS/XML, IG/Graph APIs)

Developed utilities in C# and C++ to process proprietary log data into CSV/Excel spreadsheets and convert XML data into executable SQL scripts for streamlined database migrations. (C#, WinForms, .NET, C++)

Developed high-availability ML models. Deployed real-time object detection pipelines for security cameras. Worked on several web crawlers and parsers. Designed efficient workloads of big data processing pipelines. (K8s, FastAPI, Keras, Scrapy, BS4, Hadoop MapReduce)

professional skills

Data Architecture – Experience in designing hybrid cloud-native on-premise and Lakehouse Data Platform implementing modern Data Science and MLOps lifecycle practices. Familiarity with Enterprise Data Modeling, Data Quality monitoring, Data Governance and Compliance policies.

Machine Learning – Experience in building and optimizing Classification, Regression, Ranking and Time-Series forecasting models for the domains of NLP, Vision and Tabular using Keras, XGBoost, Implicit, BERTopic, Spark ML, etc. Keen on coding robust, highly parallelizable, and memory-efficient algorithms using PySpark and Dask.

Data Science – Experience in Data Mining, Collection, Cleaning, Profiling, and Feature Engineering using PySpark, Pandas, Polars, BS4, Map/Reduce and etc. Ability to apply advanced analytical methods such as clustering and regression analysis, spatio-temporal modeling, sentiment and semantic mining, association rule and decision tree learning, topic modeling, dimensionality reduction and multivariate statistics using PCA/LDA, Randomized Controlled Trials experiment design and hypothesis testing, etc.

ML Ops – Experience in setting up fully Ansible-automated on-premise cloud-native Data Platforms with Jupyterhub, Airflow, MLflow, Minio. Keen on managing Linux environments, shell scripting and setting up clusters of microservices with CI/CD using Docker, Jenkins, Github Actions and K8s. Familiarity with Kubernetes, Prometheus, Grafana and Terraform.

**academic
experience**

Deep Learning Specialization from DeepLearning.AI ⚡ May 2021 - Apr 2022

Foundational program and certification led by Dr. Andrew Ng

- Neural Networks and Deep Learning (Vectorization, Neural Nets, Backpropagation, Activation, etc.)
- Hyperparameter Tuning, Regularization, Optimization (Dropout, Vanish/Expl Gradients, LR decay, etc.)
- Structuring ML Projects (Validation, Metrics, Multi-Task Learning, e2e DL, Transfer Learning, etc.)
- Convolutional Neural Networks (Foundation, Object Det, Facial Rec, Style Transfer, etc.)
- Sequence Models (RNN, NLP, Word2Vec, GloVe, Attention, Transformer, etc.)

Worcester Polytechnic Institute in Worcester, MA, USA ⚡ Aug 2017 - May 2019

Fulbright Scholarship and Graduate Study in Computer Science

- Integration of Optical Flow in Facial Expression Recognition (TensorFlow, Keras)
- Big Data Analytics and Hotspot detection of NYC Taxi trips (Spark, Scala, Python)
- Object Detection with range of Classical CV and Deep Learning models (OpenCV, Keras)
- Genre-aware Music Composer using RNNs (TensorFlow, Magenta, Python)
- Text mining of Wikipedia articles: classification, clustering, and analysis (NLTK, Python)

Tbilisi State University in Tbilisi, Georgia ⚡ Sep 2012 - May 2016

Undergraduate Study in Computer Science

- Spatial Modeling of Cell-Mediated Immune Response to Tumor Growth (C, MPI, Cuda)
- Semantic analysis and classification of Georgian texts (Java, Naïve Bayes/SVM)
- Traveling Salesman Problem using Genetic Algorithms (C++, JavaScript)

Vilnius University in Vilnius, Lithuania ⚡ Sep 2014 - Jan 2015

Exchange Study in Computer Science

- Inference Engine project in Artificial Intelligence (Python, C++)
- Agile project management - SCRUM Master certification masterclass

**side
projects**

სბდსბნ :: ANBANI

[Anbani.ge](#) is an interactive platform that uses web technologies, modern typesetting, and AI to preserve each iteration of Georgian alphabet online. Included are [Anbani Wordnet](#), a AI-tool offering unsupervised relevant word suggestions; [Anbani.js](#) and [Anbani.py](#), toolkits for tasks related to the Georgian alphabet and NLP; and [Anbani TextArt](#), the first Georgian text art generator.

Flowiz

Leading Python [toolkit](#) to convert optical flow estimation artifacts into visualizable representations.

Arxiv Trends

A [Twitter Bot](#) tasked to mine social platforms, understand research trends and tweet about them.

**human
languages**

Georgian (Native) :: English (C2) :: Russian (B2) :: Lithuanian (A2)

**awards
and misc**

Fulbright Scholarship

James William Fulbright Scholarship granted by the Tree of Life Foundation and the U.S. State Department that allowed me to pursue Machine Learning graduate study at Worcester Polytechnic Institute in Massachusetts, United States.

CYBERCUBE 2016

First-ever Cybersecurity competition organized by the Ministry of Justice of Georgia with 150 participants, lasting 5 hours containing various problem sets such as executable reverse engineering, packet / logfile / malicious file, and memory dump analysis – 2nd place.

100% tuition coverage based on National University Entrance Exams