

# Luka Mdivani

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## EDUCATION

### Duke University & Duke Kunshan University (DKU) Dual Degree

Bachelor of Science in **Data Science**

Durham, NC, USA

- Full Tuition Merit-Based Scholarship, Dean's List : Fall 2021.

## PROFESSIONAL EXPERIENCE

### Pogust Goodhead - Strategy Unit

Nov 2023 – Present

Data Analyst / AI Solution Engineer | [Stack](#) : Python, AWS, Azure, Transformers, PyTorch, Power BI, Google Analytics

📍 London, U.K

- Developed a network of **10+ PowerBI** dashboards for real-time reporting to **C-suite stakeholders**, integrating data from over 5 departments, introducing **5 new KPIs and dozens of unexplored data points** per department. Managed data collection, cleansing, submission, and reporting using **Azure Data Factory**.
- Regularly created and presented **ad-hoc** dashboards and data visualizations to **senior leadership and major investors**.
- Developed a comprehensive desktop application, including a GUI, document processing module, and a **legal AI Chatbot** using a fine-tuned Question Answering LLM. Hosted in **Databricks and AzureML**, enabling secure queries with private documents.
- Wrote a **python script** to automate a legal time-tracking workflow, saving hours daily and generating performance **dashboards** for **senior stakeholders**.
- Architected a **AI-driven** news scraping and summarization software on **AWS Lambda**, delivering daily **PowerBI reports** to the CEO.
- Engineered and deployed a custom **email classification ML model** in a customer email response automation workflow. **Reduced** the processing time of a 5000+ email backlog from days **to 4 minutes**.

### United Nations Development Programme

Oct 2023 – Jan 2024

Machine Learning Engineer Researcher | [Stack](#) : Python, Transformers, PyTorch, Matplotlib

Remote 📍 NYC, U.S.A

- **Performed EDA on a novel raw dataset labeled with 20 African Union goals**, created an advanced dataset for a multi-label classification task.
- Trained **multiple transformer based models** to evaluate baseline performance on a multi-label classification task.

### Bank of Georgia

Sep 2023 – Nov 2023

Artificial Intelligence Software Engineer | [Stack](#) : Python, Rasa, PyTorch, PostgreSQL, Power BI

📍 Tbilisi, Georgia

- **Developed a Rasa customer service chatbot** across multiple Bank Of Georgia channels. Achieved **30% increase** in full-service rate.
- Extracted operational text data from hard coded **Python** files and migrated them to a **PostgreSQL** database, enabling dynamic access.

### Advanced Software Design - Computer Science Department at Duke University

Sep 2022 – May 2023

Teaching Assistant | [Stack](#) : Java, JavaFX, OOP, Multi Threading

📍 Durham, U.S.A

- **Taught, mentored, and evaluated 5** students per term on concepts like Object-Oriented Programming, Design Patterns, Unit Testing, Project Management, and clean coding techniques.

### Data+ @ Computer Science Department at Duke University

May 2022 – July 2022

Data Scientist Intern | [Stack](#) : Python, Pandas, PyTorch, Tkinter, Threading, Seaborn, Matplotlib

📍 Durham, NC, U.S.A

- Performed Data processing for 300GB drone captured data: orthophotographs, contours and LiDAR digital surface models (DEM).
- Automated data **analysis and visualization** using **Python** scripts ArcGIS software and API, reducing processing time from **2 weeks to 1 hour** per archeological site. Created and documented an advanced methodology for the pipeline.
- Trained a U-Net image segmentation model to identify archaeological landscape features, increasing precision-recall AUC 3.5x times.

## SKILLS

### Programming Languages

[Python](#), [Java](#), C++, MATLAB, R, Excel, [SQL](#) and DAX.

### Data Science/ML Skills

ETL, EDA, Data Visualization, Deep Learning, Statistics, Neural Networks, [NLP](#), [Large Language Models](#), [GenAI](#).

### Software Engineering Skills

[AWS](#), [Azure](#), Project Planning, OOP, Design Patterns, Jira, [Git](#), [Docker](#), Dependency Management, Unit Testing.

### Data Science Libraries

NumPy, Pandas, SciPy, scikit-learn, Huggingface Transformers, Tensorflow, Seaborn, Matplotlib, PyTorch, OpenCV.

### Analysis Software

[PowerBI](#), [Tableau](#), Microsoft Office Suite, [Looker Studio](#), [Google Analytics](#), ArcGIS.

### Languages

English(*Fluent*), Georgian(*Native*), Chinese(Intermediate) and Russian(Fluent).

## RESEARCH EXPERIENCE & PROJECTS

### Large Language Models For Recommendation Systems

May 2023 – Sep 2023

Researcher

Remote 📍 Durham, NC, U.S.A

- **Fine-tuned a 7 billion parameter Large Language Model (LLaMa-7B)** on the 100k and 10M MovieLens datasets using the HuggingFace Transformers library to perform direct recommendation/rating prediction tasks.
- Implemented Low-Rank Adaptation (LoRA) to freeze model parameters, resulting model **significantly outperformed baseline zero-shot and few-shot LLM modeling**.

### Online ChatGPT Online Article Summarizer

Dec 2022

Machine Learning Engineer/ Software Developer

📍 Durham, NC, U.S.A

- Developed a Python software enabling any **ChatGPT model to source online articles**, just by providing the URL. Built with custom scraping tools and the **OpenAI API**.