Flavjo Xhelollari

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Statement

Computer science engineering young professional with expertise in software engineering and machine learning. Graduating with a Master's in Computer Engineering from New York University. Committed to enhancing data-driven solutions within collaborative SWE teams. Open to remote or relocation for MLE and SWE roles.

Education

- **New York University** — Brooklyn, NY
  Masters in Computer Engineering. Concentration in ML; GPA:3.722 - Merit-Based Scholarship — *Sep 2022 - May 2024*
  Courses: Machine Learning, Big Data, Machine Learning for Cybersecurity, Deep Learning, High Performance Machine Learning
- **American University in Bulgaria** — Blagoevgrad, BG
  Bachelor of Computer Science and Mathematics; GPA: 3.87 - Magna Cum Laude — *Aug 2018 - May 2022*
  Courses: Calculus I-IV, Linear Abstract Algebra, Category Theory, Statistics, Data Structures, Discrete Mathematics, Computer Architecture, Database Systems, Software Engineering, Complex and Numerical Analysis, Software Engineering.
- **Truman State University** — Kirksville, MO
  Bachelor of Computer Science; Exchange — *Jan 2021 - May 2021*
  Courses:Algorithms, Fundamentals of Data Science, Artificial Intelligence

Skills Summary

Programming Languages : C, C++, Python (+Flask), Java; **EDA:** NumPy, Pandas, Tableau, Weights and Biases. ; **ML and DL:** Pytorch, CUDA, GNN, Scikit-learn, HuggingFace ; **Big Data and Databases :** MongoDB, PostgreSQL, Apache Hadoop, Neo4j ; **Cloud :** AWS, Azure, Airflow (Deployment), Kubernetes, Docker ; **Extra:** Linux, LaTeX, Git and Bitbucket.

Academic Projects

- **Optimizing Stable Diffusion**: Achieved speedup by finding bottlenecks. Utilized NYU HPC Greene Supercomputer. Modified CNN architecture with 1x1 convolution. Performed distributed deep learning. Used PyTorch Profiler and Wands and Biases for hyperparameter tuning. Managed to achieve a 178 FID score. Link
- **moneyMate**: Java-based desktop application for managing finances. User-friendly graphical interface. Utilizes a database to store and retrieve financial data : CRUD operations. Includes features such as budget planning and analysis, and it is designed to be customizable and scalable for a variety of personal finance needs. Link
- **Building Better Web-App-Firewall Models with Transformers**: SQL Injections, common attack methods, involve embedding malicious code in a SQL query to trick a system. This project provides a way to mitigate these attacks. Link
- **Mathematical Optimization in Machine Learning: AUBG** 16^{th} **Annual Student Faculty Research Conference "Fellowship of the Mind"**: Abstract
- **Informed Search Algorithms in AI**: I created a Python application to demonstrate the effectiveness of informed search algorithms, illustrated through an interactive N-puzzle game. I optimized the algorithms for efficiency and contributed to full-stack development, enhancing the user experience. The code is available upon request, in accordance with university policy.

Experience

- **Data Glacier** — Virtual, US
  Data Science Intern — *Jun 2023 - Sep 2023*
  - **Duties**: Managed Kubernetes clusters for scalable data analysis. Implemented Airflow for workflow orchestration. Leveraged MongoDB and PostgreSQL for data storage and retrieval. Contributed to marketing campaign analytics and cross-selling recommendation pipelines.
- **American University in Bulgaria** — Blagoevgrad, Bulgaria
  Undergraduate Teaching Assistant — *Sep 2020 - Dec 2021*
  - **Courses: Modern Physics and Linear Algebra**: Assisted with class preparation and course materials (help design the course, construct tests, prepare materials, guest lecturing, office hours). Increased the tutorials' participation by more than 50%. Advocated for the creation of the Physics major at the university. Named best TA for the semester.