Shayan Alahyari

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github.com/ShayanAlahyari

EDUCATION

Western University 2024 – 2026
MSc. Computer Science London, Canada
Thesis: "Enhancing Data Augmentation Techniques In Deep Learning"
Supervisor: Prof. Mike Domaratzki
GPA: 4.0/4.0

Western University 2022 – 2024
BS. Computer Science London, Canada
Major Awards: NSERC Student Research Award
GPA: 4.0/4.0

Shiraz Azad University 2012 – 2016
BE. Electrical Engineering Shiraz, Iran

NSERC-FUNDED RESEARCH PROJECTS

Software and Machine Learning Engineering for Genomic Selection May 2024 – Sep 2024
Funding: **Awarded NSERC Student Research Award of $10,000**
Supervisor: Professor Mike Domaratzki, Western University
Repository: *https://github.com/ShayanAlahyari/Advanced-Data-Engineering-for-Machine-Learning-in-Genomic-Selection*

- Developed **shell and Python scripts** to process **large genomic datasets** for machine learning.
- Managed and processed over **2TB** of genomic data, handling **500+** BAM files across **20+** chromosomes.
- Conducted BAM indexing, filtering, base recalibration, variant calling, and SNP filtering.
- Improved processing efficiency by **30%** through optimized **parallel computing** on servers.
- Utilized technologies including **GATK, Miniconda, samtools, parallel, Java, and Python**.

PERSONAL PROJECTS

Histopathologic Cancer Detection Project 2024 – 2025
Repository: *https://github.com/ShayanAlahyari/Histopathologic_Cancer_Detection*

- Designed and trained a deep **Convolutional Neural Network (CNN)** in **PyTorch** for cancer classification, integrating **GAN**-generated synthetic images to improve model robustness and accuracy.
- Implemented **advanced data augmentation** methods and leveraged **GPU acceleration** to optimize training processes, increasing computational efficiency and reducing training time.
- Achieved a high validation **AUC of 0.989**, demonstrating effective and reliable cancer detection through enhanced deep learning techniques.

PROFESSIONAL EXPERIENCE

FINANCIAL ADVISOR Jul 2019 – Nov 2022
CURO Financial Technologies Corp London, Canada

- Built strong **client relationships** and achieved **95%+ satisfaction** by providing excellent service to clients in multiple industries.
- Analyzed and cleaned **financial data** from multiple sources to improve client financial decisions by **20%**.
- Created easy-to-use **financial guides** that boosted client understanding and increased tool usage by **30%**.

ELECTRICAL ENGINEER Jun 2016 – Jul 2018
Gishay Negar Shiraz, Iran

- Designed electronic **circuits/systems** for **20+ applications** using advanced technology, boosting system efficiency and performance by **30%**.
- Improved **circuit reliability** by **25%** and cut **energy use** by **20%** using simulation tools across multiple projects.
- Created testing protocols and ran **100+ tests**, ensuring **95% compliance** with performance standards.

TEACHING POSITIONS

Graduate Teaching Assistant Sep 2024 – present
Western University, Faculty of Science

- Teaching assistant for Coding Essentials: Introduction to Python (CS 1026)
- Supported **1:1 student learning** through email, tutorials, and office hours.
- Debugged **Python code** and taught core programming concepts to improve problem-solving skills.

TECHNICAL SKILLS

- **Languages**: Python, Java, C, C++, SQL, Bash Shell
- **Tools**: Git, Docker, AWS, MySQL, .NET, ASP.NET, Agile
- **Libraries**: TensorFlow, PyTorch, React, Node.js, Django, Bootstrap, RESTful APIs