Mohamad Ahmad

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Education

University of Ottawa Ottawa, ON
Honours BSc. Mathematics | Minor in Statistics (Co-op). CGPA: 9.85/10 May 2024

Awards: Dean's List (2019-2024), Victor Linis Math Scholarship,
Shopify Entrepreneur Scholarship, Startup Garage Entrepreneur Scholarship.

Relevant Coursework: *Python, R, TensorFlow, sckit-learn, Keras, CUDA, Multivariate Optimization, Dynamical Systems Modelling, Applied Linear Algebra, Statistical Machine Learning, Computer Vision, Deep Learning.*

Experience

BlueGem.ai Ottawa, ON
Co-Founder, Chief Machine Learning Scientist Jun 2023 -
- Preparation and teaching of 70+ courses on ML, statistics, calculus, cybersecurity, and related topics.
- Machine learning/data science consulting.
- Professional development workshops (data science, R, Python, PowerBI, etc.).

Global Affairs Canada Ottawa, ON
ML Consultant Jan 2023 – Jun 2023
- High-dimensional optimization spanning data of 100+ countries.
- Statistical modelling and linear programming.
- Solution optimization (parallelization), deployment, and staff training.

Saxony.co Ottawa, ON
Co-Founder, CEO Jun 2021 - Jan 2023
- Business strategy and financial optimization.
- Live SQL integration. Design automation for 2000+ orders in Python. Statistical sales forecasting.
- Logistics management, business management, tax structure management, etc.

CAE Ottawa, ON
ML Consultant May 2022 – Sep 2022
- Markov Chain Monte Carlo simulation.
- Failure and risk analysis spanning 20,000+ simulated environments.
- Solution optimization (parallelization), deployment, and staff training.

Current Projects

Rolljam Penetration Test
- Jamming and capture of rolling codes on 390MHz (Liftmaster garage opener) and 315MHz (key fob).
- Emulation of rolling code frequencies (Security +1.0).

CNN for Algorithmic Trading
- Live data collection from financial APIs, feature engineering for 120 predictors, CNN model training.
- Performance evaluation on OOS data and simulated (MCMC) data.

Skills & Interests

Technical: R, Python, Pandas, NumPy, Matplotlib, TensorFlow, Keras, scikit-learn, XGBoost, SQL, Git, LaTeX.
Languages: Arabic, English, and French (beginner).
Interests: Computer vision, deep learning, statistical machine learning, cybersecurity, penetration testing.