Wissam Fawaz

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Data Scientist

Professional Summary

- Detail-oriented trilingual technologist ranked among the **top 2% most-cited scientists** in 2021 and 2022 in recognition of high-impact, data-centric research
- Proven expertise in mentoring **award-winning data-focused projects** and developing scalable, secure solutions tailored to complex business challenges
- Deep expertise in data science and advanced machine learning techniques, including **supervised machine learning**, **unsupervised machine learning**, and **deep learning**
- Lifelong learner holding industry-recognized certifications, including **AWS Cloud Practitioner**, **AWS AI Practitioner**, **Google Data Analytics Professional**, and **Microsoft AI-900**

Tech Stack & Skills

Languages:	Python (Pandas, NumPy, Matplotlib, Plotly, Dash, Scikit-learn, TensorFlow, PyTorch), R, SQL, Java, C++, JavaScript
Software, Applications & Tools:	IBM Cognos Analytics, Tableau, Jupyter Notebook, Google Colab, Microsoft Excel (Advanced), Azure Sandbox, Git
Databases:	SQLite, MySQL
Cloud Computing:	AWS, Microsoft Azure
Project Management Fundamentals:	Agile, Waterfall, Scrum, Kanban, Trello
Skills:	Data wrangling, Exploratory data analysis, Data visualization, Statistical analysis, Web scraping, Machine learning, Reinforcement learning, Deep neural networks, Convolutional neural networks, Recurrent neural networks, Natural language processing, Large language models, Critical thinking, Time management, Teamwork

Work Experience

Professor of Computer Engineering **September 2019 – Present**
Lebanese American University | Byblos, Lebanon

- Led the development of a conversational chatbot for student advising, leveraging large language models, vector databases, retrieval-augmented generation, and LangChain
- Ranked among the top 2% most-cited scientists according to Stanford University's 2021 and 2022 studies (Source: https://news.lau.edu.lb/2023/a-total-of-17-lau-faculty-members-are-among-the-top-2-percent-scientists-worldwide.php)
- Mentored 3 award-winning data science-driven projects:
    - "Adaptive Dependent Care System", Murex best innovative development project, 2023
    - "UAV-based inspection of power lines", Murex most collaborative project, 2022
    - "Smart Alzheimer Friendly Environment", Murex best innovative development project, 2019

Associate Professor of Computer Engineering **September 2012 – August 2019**
Lebanese American University | Byblos, Lebanon

- Developed an enhanced least recently used (LRU) algorithm using support vector machines, improving cache-hit probability by 15%
- Implemented a Java-based simulator for vehicular ad-hoc networks and free-space optical communication systems, enabling the publication of 15 data-focused journal papers

- Pioneered the development of a university course on Android application development, equipping students with the skills required to incorporate mobile apps into hundreds of final year projects

Assistant Professor of Computer Engineering **September 2006 – August 2012**
Lebanese American University | Byblos, Lebanon

- Developed a C++ simulator for wavelength-routed optical networks, resulting in the publication of 8 data-focused journal papers
- Developed a university course on Java programming from scratch, supplementing it with hands-on lab projects
- Received a Fulbright research award in 2008, which allowed me to spend 4 months as a visiting data scientist in the Computer Science department at North Carolina State University, USA

Projects

Implementation of a Sales Forecasting Model **February 2025 – March 2025**

- Conducted Exploratory Data Analysis (EDA) to uncover trends, seasonality, and key drivers of sales
- Engineered relevant features, incorporating temporal and external factors to enhance predictions
- Developed and optimized an XGBoost model to forecast monthly sales for a retail store

Development of a Large Language Model **October 2024 – January 2025**

- Developed a GPT-like large language model using the PyTorch library from the ground up
- Pre-trained the foundation model using a dataset of public domain books from Project Gutenberg
- Fine-tuned the model for instruction-following tasks using the Alpaca dataset

Education

Ph.D. Computer Engineering **September 2002 – November 2005**
Sorbonne Paris Nord University | Paris, France
M.S. Computer Engineering **September 2001 – August 2002**
Pierre and Marie Curie University | Paris, France
B.E. Computer Engineering **September 1996 – August 2001**
Lebanese University | Beirut, Lebanon

Certifications

Deep Learning by DeepLearning.AI **January 2025**
IBM Data Analyst **January 2025**
Machine Learning by Stanford University **December 2024**
Microsoft Certified: Azure AI Fundamentals **December 2024**
AWS Certified AI Practitioner **October 2024**
AWS Certified Cloud Practitioner **September 2024**
Google Data Analytics Professional **April 2023**