

Insaf Hashem | Machine Learning Engineer

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Summary

Driven **Machine Learning Engineer** with hands-on experience developing and deploying AI solutions, including **generative models** and **autonomous AI agents**. Proficient in **supervised and unsupervised learning**, **natural language processing**, **anomaly detection**, and **deep learning**. Skilled in **Python**, **PyTorch**, **TensorFlow**, and **cloud-based model deployment**. Seeking a challenging role to leverage AI for building scalable solutions in **generative AI** and **autonomous systems**.

Experience

AI Agents Developer at [StartMeUp.ai](#) - Remote Jun 2025 - Aug 2025

- Deployed autonomous AI agents using **LLMs** and **TypeScript** for tasks such as **SEO-optimized article generation**, **image integration**, **auto-publishing** and **scheduling posts**.
- Leveraged the **OpenAI API** for natural language understanding and content creation, and used **GitHub** for workflow automation, version control, and seamless deployment in production environments.

Machine Learning Engineer Trainee at ZAKA - Remote Feb 2025 - Apr 2025

- **Led a group of 3** in Developing a **real-time fault detection system** using **Local Outlier Factor** and **Random Forest Classifier** models.
- Processed **time-series data** from **simulated 3-phase systems** and **visualized** results via a **Flask** dashboard.
- Focused on **low-latency ML** inference (UDP), **signal preprocessing**, and **ML system design**.

Education

Jinan University, Tripoli, Lebanon Sep 2022 - Jun 2025
B.S. in **Computer Science**, CGPA: 3.3 /4.0.

Certifications

- **IBM AI Workflow Specialization, [Coursera](#)** (offered by IBM) July 2025 - Present
Covered: **AI project lifecycle**, **feature engineering**, **ML model training**, and **deployment**.
Building and deploying an ML model using **Python**, **Scikit-learn**, and **Flask** in the **IBM AI Capstone project** that predicts next month revenue, applying best practices in **data processing** and **workflow automation**.
- **Machine Learning Specialization, [Zaka.ai](#)** Sep 2024 – May 2025
Covered: **Data Science Fundamentals**, **ML Algorithms**, **Deep Learning**, **NLP**, **CV**, **ML Ops & Research**.

Projects

Food Habit Tracking App Mar 2025 - Jun 2025

- Built a **Conditional Variational Autoencoder** for recipe generation using **nutrition data** and user **inputs**.
- Applied **Dynamic Masking** and trained on a **cleaned nutrition dataset**.
- Built the web app with **React** and **Typescript**

Cleaning Food Dataset Using Gemini API Apr 2025

- Used **Gemini API** to extract structured data from unstructured recipe text, Focused on **prompt engineering**, **data cleaning**, and **input formatting**.

Customer Segmentation and RFM Analysis for a specific retail brand Jun 2025 - Aug 2025

- Collaborated in a **team of 2** to perform **customer segmentation** using **RFM** (Recency, Frequency, Monetary) analysis for a retail brand, identifying **customer clusters** such as high value and at risk customers.
- provided **actionable insights** for **targeted marketing strategies** based on **customer behavior patterns**.
- Built a **system** that can **adapt** with different retail brands and give them insights about their data

Technical Skills

- **Languages & Tools:** Python, SQL, MySQL, Linux, Git, Google Colab, Visual Studio, Jupyter Notebook.
- **Frameworks & Libraries:** TensorFlow, PyTorch, Keras, Scikit-learn, Hugging Face Transformers, NLTK, spaCy, Pandas, NumPy, Matplotlib, Statsmodels, Flask, Gradio, SciPy.
- **Cloud Platforms:** AWS, GCP.
- **ML Skills:** NLP, LLMs, Text Classification, Entity Recognition, Sentiment Analysis, Statistical Modeling, Anomaly Detection, Vectorization, Tokenization, Regularization.

Languages & Additional Information

- **Languages:** English: Fluent, French: Intermediate, Spanish: Basic, Arabic: Native.
- **Interests:** AI for Sustainability, Puzzle Solving, Data Ethics.