Mahmoud Mayaleh *AI & Machine Learning Engineer*

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AI Engineer with a Master's in Artificial Intelligence, skilled in deep learning, NLP, and large-scale model training. Background in distributed AI systems and applied ML research.

EDUCATION

Master's in Artificial Intelligence for Connected Industries,   Paris, France
Conservatoire National des Arts et Métiers (CNAM) ☐

Bachelor of Engineering: Computer Engineering, *Ostim Technical University* ☐   Ankara, Türkiye

PROFESSIONAL EXPERIENCE

Research Intern, *CNAM* ☐   06/2025 – 09/2025
                                                                        Paris, France
- Researched RDMA and LLM workload traffic to design and evaluate scheduling strategies, modeling communication topologies, and computing communication overlap using ns-3 and SimAI.
- Designed and executed workloads for GPT models up to 175B parameters on 1024 GPUs, using SimAI to run analytical simulations, optimize NCCL/RDMA communication, and prototype MSCCL custom collectives for scalable performance analysis.

Back End Developer, *Ostim Technical University - IT department* ☐   02/2024 – 06/2024
                                                                        Ankara, Türkiye
- Created and integrated 5+ customized Odoo ERP modules and controllers, increasing system efficiency by 20% through streamlined workflows.
- Automated backend processes with Python, cutting manual data entry by 40% and reducing errors.
- Tuned database queries to accelerate ERP load times by 25%, enhancing user experience and responsiveness.

Machine Learning Intern, *ArkSigner* ☐   08/2023 – 10/2023
                                                                        Ankara, Türkiye
- Constructed an object detection pipeline achieving 90% accuracy, leveraging advanced ML methods for reliability.
- Integrated AI solutions that elevated system performance by 30%, improving automation and processing speed.
- Conducted thorough testing and validation on custom datasets to ensure deployment readiness and robustness.

Technical Assistant, *Ostim Technical University - IT department* ☐   07/2022 – 03/2023
                                                                        Ankara, Türkiye
- Diagnosed and resolved technical issues, delivering 95% student satisfaction through prompt support.
- Oversaw maintenance of university systems, maintaining 99.9% uptime for over 10,000 users.
- Trained staff effectively on new digital tools, reducing internal support response time by 25% and boosting team efficiency.

PUBLICATIONS

Enhancing Sentiment Classification on Small Datasets ☐   2025
- Tested EDA, back-translation, and NLPaug across 3 models (SVM, RF, BERT) on low-resource sentiment datasets.
- Achieved consistent accuracy gains, with contextual augmentation boosting BERT >10%, while EDA/back-translation improved traditional classifiers.

LipLingo: CNN Model for Lip Reading   2025
- Developed LipLingo with 3D CNNs + BiLSTMs, rotational validation, and standardized preprocessing.
- Reached 95% character-level and 87% sentence-level accuracy on the GRID dataset, outperforming LipNet baseline.

TECHNICAL SKILLS

Programming   **AI/ML Frameworks**
Python, C++, C#   PyTorch, TensorFlow, scikit-learn

Data Analysis & Visualization   **Other Tools**
NumPy, pandas, Matplotlib, Seaborn   Git, Docker, Linux