

# Mohammad Moazam

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## PROFESSIONAL SUMMARY

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Machine Learning Engineer specializing in LLMs and Computer Vision, with expertise in fine-tuning, efficient deployment on edge and cloud using advanced quantization techniques. Experienced in leading AI engineering teams and delivering production-ready solutions with measurable impact. Patent holder in automotive AI applications.

## EXPERIENCE

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- Stellantis** Paris, France  
*Machine Learning Engineer (Full-time)* Nov 2022 - Present
  - GenAI Tech Lead for Personal Assistant:** Leading a team of 6 AI engineers to build a proactive & personalized **Copilot** for automotive applications. Implemented custom evaluation framework using both classical NLP metrics and LLM-as-Judge approaches for continuous monitoring and improvement.
  - Patents & IP:** Filed and received approval for 2 patents out of 5 submissions for GenAI use cases in Automobile domain:
    - \* "Method and device for providing vehicle operating information" (FR3153459A1)
    - \* "Method and device for providing information about an operating anomaly affecting a vehicle" (FR3153460A1)
  - 3D Head & Eye Pose:** Completed end-to-end project from data strategy to model optimization. Evaluated SOTA models and fine-tuned on synthetic and real-world data to optimize performance for automotive use cases. Implemented deployment pipeline for edge devices.
- Boxy** Paris, France  
*Computer Vision Intern (Full-time)* Feb 2022 - Sep 2022
  - Thesis Work:** Researched and implemented multi-perspective 3D pose estimation and tracking for real-time applications.
  - Production Model & API:** Developed 2D pose estimation model with 94% accuracy and built scalable REST APIs for production environment using Flask. Implemented optimizations for real-time processing.
  - MLOps & Automation:** Created data processing pipelines using Airflow, reducing manual processing time by 70%. Implemented CI/CD flows on GitLab for automated testing and deployment.
- Laboratoire Hubert Curien** St. Etienne, France  
*Research Intern (Full-time)* Jun 2021 - Sep 2021
  - Benchmark Performance:** Evaluated SOTA models and benchmarked performance against domain-specific datasets, creating performance analysis framework for future research.
  - GAN Implementation:** Implemented Pix2Pix GAN with custom WGAN loss, resulting in 35% higher efficiency and improved image quality compared to baseline models.
- Valuelabs** Hyderabad, India  
*Senior Software Engineer (Full-time)* Jul 2019 - Nov 2020
  - Predictive Maintenance:** Developed fault detection and forecasting system using time-series analytics on historical data, achieving 87% prediction accuracy.
  - Open-Source Contribution:** Created JsonSpark, a Python wrapper for PySpark that simplifies complex JSON data processing with 40% code reduction.
- Yildiz Technical University** Istanbul, Turkey  
*Product Development Intern (Full-time)* Apr 2018 - Jun 2018
  - Medical Imaging Web App:** Designed and developed web application for biomedical imaging analysis using JavaScript and Python backend.

## EDUCATION

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- Université Jean Monnet & University of Eastern Finland** France & Finland  
*Erasmus Mundus Joint Master Degree (PSRS); Grade: B, Rank: 4* 2020 - 2022
  - Specialization:** Photonics and Machine Learning
- Hindustan Institute of Technology & Science** Chennai, India  
*Bachelor of Technology - Information Technology; GPA: 9.44/10* 2015 - 2019
  - Key Courses:** Machine Learning, Artificial Intelligence, Data Structures, Algorithms, Operating Systems

## TECHNICAL SKILLS

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- **AI/ML:** LLMs (fine-tuning, quantization, evaluation), Computer Vision (pose estimation, tracking, segmentation), Deep Learning, Model Optimization
- **Languages:** Python (advanced), C++ (intermediate), JavaScript, Bash, Dart
- **Frameworks:** PyTorch, HuggingFace (Transformers, PEFT), OpenCV, Keras, Flask, RESTful APIs
- **MLOps & Tools:** Airflow, Docker, Git, CI/CD, Slurm, SQLite, Model Monitoring
- **Soft Skills:** Team Leadership, Project Management, Technical Writing, Public Speaking

## PATENTS & HONORS

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- Stellantis recognizes as top talent in AI domain within the company. (2025)
- Patent: “Method and device for providing vehicle operating information” [*Explains the methodology to interface car info using LLMs*] (FR3153459A1, 2025)
- Patent: “Method and device for providing information about an operating anomaly affecting a vehicle” [*Explains how to troubleshoot faults from CAN signals using LLMs*] (FR3153460A1, 2025)
- Stellantis Genius Award for best Patent on the topic “GenAI-based Vehicle Troubleshooting System” (2023)
- Ranked 4th in Master Degree (2020)
- IDEXLYON Scholarship recipient for Erasmus Mundus Joint Master Programme PSRS (2020)
- Erasmus+ Exchange Programme Scholarship (2018)
- Meritoriously passed Bachelor’s with 9.44 CGPA (2019)
- Certificate of Merit for Best Bachelor’s Research Project (2019)

## OPEN SOURCE PROJECTS

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- **OCR Flask App (2021):** Web application with OCR capabilities via UI and REST APIs using Flask and Tesseract. [github.com/mzmamoazam/ocr-flask-app](https://github.com/mzmamoazam/ocr-flask-app)
- **irisSeg (2020):** Python package for iris and pupil segmentation using Daugman’s integrodifferential operator. Available on PyPI with 500+ downloads. [github.com/mzmamoazam/irisSeg](https://github.com/mzmamoazam/irisSeg)
- **jsonSpark (2019):** Python package that simplifies conversion of PySpark JSON dataframes into Python dictionaries, reducing code complexity by 40%. [github.com/mzmamoazam/jsonSpark](https://github.com/mzmamoazam/jsonSpark)
- **Real-Time Face Recognition (2018):** Tool that collects facial data via webcam and performs real-time recognition using TFLearn. [github.com/mzmamoazam/face-recognition](https://github.com/mzmamoazam/face-recognition)

## PROFESSIONAL DEVELOPMENT

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- **Run LLM on Edge Devices:** University of Paris-Saclay & Pruna AI (2024) - Specialized training on optimizing and deploying LLMs on resource-constrained environments
- **Deep Learning with PyTorch:** Neural Style Transfer specialization with focus on GANs (2022)
- **Machine Learning Fundamentals:** Udacity Professional Track (2021)

## LANGUAGES

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- English (Proficient), Kashmiri (Native), French (Intermediate), Turkish (Basic), Hindi (Proficient), Urdu (Proficient)