# Mohammad Moazam

Mobile: +33754494986
Portfolio: https://mzmmoazam.github.io
Email: mzm.moazam@gmail.com
Github: https://github.com/mzmmoazam
LinkedIn: https://www.linkedin.com/in/mzmmoazam

## Professional Summary

Senior AI Engineer with 5+ years of ML/AI experience specializing in GenAI, LLMs, and cross-industry AI applications. Proven track record leading AI teams to deliver production-ready solutions including intelligent copilots, predictive analytics, and decision support systems. Patent holder with expertise in fine-tuning, model optimization, time-series forecasting, and scalable deployment across automotive, industrial, and enterprise domains.

## Experience

- **Stellantis** — Paris, France
  *GenAI Technical Lead (Full-time)* — *Oct 2023 - Present*
  - **Team Leadership & Strategic Delivery**: Leading a team of 6 AI engineers to develop proactive, personalized Copilot solutions for automotive applications, driving product strategy, architecture design, and execution. Achieved 25% improvement in user engagement and 40% reduction in query resolution time.
  - **Copilot for Rhapsody – Requirement Engineering**: Spearheaded the development of an intelligent Copilot automating the generation and validation of statecharts, unit tests, sequence diagrams, and integration tests, boosting engineering productivity and iteration speed.
  - **Patents & Innovation**: Filed 5 patents with 3 granted, generating $2M+ in IP value:
    - "Method and device for providing vehicle operating information" (FR3153459A1)
    - "Method and device for providing information about an operating anomaly affecting a vehicle" (FR3153460A1)
    - Worldwide patent for vehicle troubleshooting using LLMs (WO2025062082A1)

- **Stellantis** — Paris, France
  *Machine Learning Engineer (Full-time)* — *Nov 2022 - Oct 2023*
  - **3D Head & Eye Pose Estimation**: Delivered an end-to-end system from data strategy to edge deployment, achieving 92% accuracy and 15ms inference time, optimized for automotive hardware constraints.
  - **GenAI & Document Intelligence**: Developed RAG-based knowledge retrieval systems and document processing workflows, improving domain-specific accuracy by 35% and reducing manual analysis time by 60%.
  - **Custom Evaluation Framework**: Designed evaluation frameworks combining classical NLP metrics and LLM-as-Judge methods to ensure continuous monitoring and performance improvement of deployed GenAI solutions.

- **Boxy** — Paris, France
  *Computer Vision Engineer / ML Intern (Full-time)* — *Feb 2022 - Sep 2022*
  - **Research & Development**: Researched and implemented multi-perspective 3D pose estimation and tracking for real-time applications, contributing to 30% improvement in tracking accuracy over baseline models.
  - **Production Model & Scalable APIs**: Developed 2D pose estimation model with 94% accuracy and built scalable REST APIs serving 10K+ requests/day using Flask with Redis caching. Implemented real-time processing optimizations achieving sub-100ms response times.
  - **MLOps & Automation**: Created automated data processing pipelines using Airflow, reducing manual processing time by 70% and enabling continuous model retraining. Implemented CI/CD flows on GitLab with automated testing, achieving 99.5% deployment success rate.

- **Laboratoire Hubert Curien** — St. Etienne, France
  *Research Engineer / ML Intern (Full-time)* — *Jun 2021 - Sep 2021*
  - **Model Benchmarking & Optimization**: Evaluated 15+ SOTA models and benchmarked performance against domain-specific datasets, creating comprehensive performance analysis framework that improved model selection efficiency by 50%.
  - **Advanced GAN Implementation**: Implemented Pix2Pix GAN with custom WGAN loss, achieving 35% higher training efficiency and 20% improved image quality (SSIM score) compared to baseline models. Optimized for edge deployment with 4x model compression.

- **Valuelabs** — Hyderabad, India
  *Senior Software Engineer / Data Scientist (Full-time)* — *Jul 2019 - Nov 2020*

- **Predictive Analytics & Time-Series Forecasting**: Developed fault detection and forecasting system using advanced time-series analytics (LSTM, Prophet) on historical industrial data, achieving 87% prediction accuracy and preventing $500K+ in equipment downtime. Implemented anomaly detection algorithms for proactive maintenance scheduling.
- **Open-Source & Code Optimization**: Created JsonSpark, a Python wrapper for PySpark that simplifies complex JSON data processing with 40% code reduction and 25% performance improvement. Package adopted by 500+ developers across multiple industries.
- **Cross-Domain Analytics**: Built predictive models for supply chain optimization and resource allocation, demonstrating transferable ML expertise across industrial verticals with consistent 80%+ accuracy improvements.

- **Yildiz Technical University** — Istanbul, Turkey
  *Product Development Engineer / Intern (Full-time)* — *Apr 2018 - Jun 2018*
  - **Medical Imaging & Web Applications**: Designed and developed web application for biomedical imaging analysis using JavaScript frontend and Python backend, processing 1000+ medical images with automated analysis workflows.

## Core Technical Expertise

- **GenAI & LLMs**: Fine-tuning (LoRA, QLoRA, PEFT), Model Optimization, RAG Implementation, LLM-as-Judge, Custom Evaluation Frameworks, Document Intelligence
- **ML/AI Frameworks**: PyTorch, HuggingFace (Transformers, PEFT), scikit-learn, XGBoost, Keras, TensorFlow, OpenCV
- **GenAI Orchestration**: LangChain, LlamaIndex, RAG Pipelines, Vector Databases, Prompt Engineering
- **Languages & Tools**: Python (Expert), SQL, C++, JavaScript, Bash, Git, Docker, RESTful APIs
- **Cloud & MLOps**: AWS (familiar), Airflow, CI/CD, Model Monitoring, Edge Deployment, Quantization Techniques
- **Analytics & Modeling**: Time-Series Forecasting, Anomaly Detection, Predictive Maintenance, Statistical Modeling, A/B Testing
- **Leadership & Soft Skills**: Team Leadership (6+ engineers), Cross-functional Collaboration, Technical Writing, Stakeholder Communication

## Education

- **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
  - **Relevant Coursework:** Advanced ML, Statistical Signal Processing, Time-Series Analysis, Optimization Methods
- **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, Database Systems, Financial Computing

## Key Achievements & Recognition

- **Top AI Talent Recognition** - Stellantis (2025): Recognized as top talent in AI domain company-wide
- **Patent Portfolio** - 3 granted patents (2 national, 1 worldwide) from 5 submissions in GenAI automotive applications
- **Genius Award** - Stellantis (2023): Best Patent for "GenAI-based Vehicle Troubleshooting System"
- **Academic Excellence** - Ranked 4th in Master's program (Full Scholarship) and graduated with 9.44 CGPA in Bachelor's
- **Research Impact** - Certificate of Merit for Best Bachelor's Research Project (2019)

## Open Source Projects & Innovation

- **OCR Flask App (2021)**: Production-ready web application with OCR capabilities via UI and REST APIs using Flask and Tesseract, serving 500+ daily users. github.com/mzmmoazam/ocr-flask-app
- **irisSeg (2020)**: Python package for iris and pupil segmentation using Daugman's integrodifferential operator. Available on PyPI with 500+ downloads and adopted in biometric research. github.com/mzmmoazam/irisSeg
- **jsonSpark (2019)**: High-performance Python package simplifying PySpark JSON dataframe processing, reducing code complexity by 40% and improving processing speed by 25%. Industry adoption across multiple sectors. github.com/mzmmoazam/jsonSpark
- **Real-Time Face Recognition (2018)**: End-to-end facial recognition system with real-time processing capabilities using TFLearn, achieving 95% accuracy on custom datasets. github.com/mzmmoazam/face-recognition

## Professional Development & Certifications

- **LLM Edge Deployment Specialization**: University of Paris-Saclay & Pruna AI (2025) - Advanced training on optimizing and deploying LLMs on resource-constrained environments
- **Deep Learning with PyTorch**: Specialized in Neural Style Transfer and GANs with focus on production deployment (2022)
- **Machine Learning Fundamentals**: Udacity Professional Track - Advanced ML algorithms and deployment strategies (2021)
- **Ready for DataRobot Training**: Eager to complete full DataRobot certification and leverage AutoML capabilities for enterprise solutions

## Languages

- **Professional:** English (Proficient), French (Intermediate) — **Native/Fluent:** Kashmiri, Hindi, Urdu — **Basic:** Turkish, Arabic (learning)