Masoud Masoori

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# AI / Machine Learning Engineer

## Professional Summary

**Aspiring AI/ML Software Engineer** with hands-on experience developing multilingual NLP tools, autonomous agents, and predictive models using Python, AWS, AZURE, GCP and cloud-native microservices. I am currently completing an AI graduate program at Seneca College with a strong foundation in model deployment, generative AI, and enterprise-scale development. Proven ability to learn fast, collaborate across teams, and deliver production-grade solutions, now eager to contribute to Seismic’s mission of innovative, scalable AI-driven platforms with applied expertise in computer vision, document understanding, multilingual NLP(NLT), autonomous agents, and robotics systems using ROS and hardware diagnostics.

## Core Competencies

* AI/ML & Deep Learning: Regression, Classification, RNNs, CNNs, Transformers, Reinforcement Learning, PyTorch, TensorFlow, YOLO, OpenCV, TFLite
* Model Optimization: Model Evaluation, Feature Engineering, Hyperparameter Tuning
* NLP & Prompt Engineering: NLTK, HuggingFace, BLEU, Tokenization, Sentiment Analysis, langdetect
* Computer Vision & Deep Learning: YOLO, OpenCV, Tesseract, TensorFlow Lite, PyTorch, TensorFlow
* Robotics & Automation: ROS1, ROS2, JetAuto, TurtleSim, Path Planning, Autonomous Navigation
* Voice & Agent Systems: Whisper, XTTS, Reflexive Memory, CMP Logic, Agent Communication
* Cloud & Deployment: Azure (OpenAI, GPT-4), AWS, GCP (Vertex AI), FastAPI, CI/CD (GitHub Actions)
* Data Analysis & Visualization: Python, Pandas, NumPy, Matplotlib, Power BI
* OCR & Mobile AI: Google ML Kit, langdetect, OCR integration in Android pipelines
* Hardware & Diagnostics: Dell/HP repair, iOS support, OS optimization, QA/QC
* Civil Engineering Systems: NATM/TBM tunnel inspection, infrastructure planning, safety compliance

## AI/ML Projects

* **Daena AI (v11)- Autonomous AI VP & Agent Company Orchestrator: :**

Designed and deployed a full-stack, production-grade AI-native company system with built-in governance and compliance layers.

* + Features: multi-agent governance, real-time LLM routing (OpenAI, DeepSeek, Gemini), investor outreach automation.
  + Tech: FastAPI, Azure OpenAI, XTTS, HTMX, Tailwind, GCP+Azure hybrid brain training.
  + Roles: System architect, lead developer, agent trainer, UI/UX integrator, investor pitch strategist.

Live Demo: https://daena.mas-ai.co

* **NatureHive NLP (v3–v7):**

Nature-inspired NLP engine integrating oscillatory dropout, hybrid token routing, and biological attention mechanisms. Progressed from GPT-2 baseline to 2.4× token speed and 35% lower perplexity. Now, it is advancing toward v7 with swarm-layered optimization and Fibonacci-driven control.

* **Transit Forecaster:**

Regression model (R² = 0.81) predicting public transit demand using historical and seasonal data, built with Python and Scikit-learn.

* **LingoVids:**

AI-powered tool that takes a YouTube link and automatically generates multilingual subtitles and **cloned voiceovers** in the original speaker’s voice. Combines Whisper for transcription, translation APIs, and speaker-adaptive TTS pipelines to produce synchronized audio in multiple languages.

* **JetAuto Robotics Controller (Seneca AIG): :**

Built ROS1-based robot control using publisher/subscriber nodes for square-pattern navigation and obstacle avoidance.

Tested in Gazebo, deployed to real JetAuto robot over SSH, and optimized via real-time diagnostics.

* **MedScan – Pill & Prescription Assistant (Seneca Capstone):**  
   AI-powered mobile app for real-time pill detection and prescription scanning using

YOLO, OCR (Tesseract), and TensorFlow Lite. Extracts multilingual text, classifies pills

from images, and triggers smart reminders with caregiver alerts.  
 Built with Python, OpenCV, Google ML Kit, and FastAPI.

## AI Systems & Robotics Training Summary

* Completed applied training in AI systems design, agent modeling, cloud optimization, and robotics during 2024–2025 AIG program at Seneca College.
* Gained hands-on experience in:

- Building ROS1/ROS2 robots with Gazebo simulation and TurtleSim controls.

- Training NLP and Deep Learning models (RNNs, CNNs) on real datasets.

- Implementing advanced ML workflows for image classification, sentiment analysis, and autonomous agent reasoning.

• Developed and deployed AI-enabled mobile apps (MedScan), robotic controllers (JetAuto), and full-stack autonomous systems (Daena).

## Professional Experience

**Computer Technician / Engineer – Ivy Technology, North York, ON | 2022–Present**

- Performed diagnostics and repair on Dell, HP, and other systems  
- Led system documentation, QA checks, and predictive maintenance  
- Used Python and Excel for troubleshooting pattern analysis  
- Mentored team on structured repair methodology

**IT Support & Admin | QA/QC Analyst | 2016–2022**  
*Torocan Construction Inc. & JRK Co.*

- Created internal monitoring tools using **Python** for server uptime, system log parsing, and network stability.

- Managed **end-to-end IT support**, including OS rebuilds, secure backups, and anti-malware automation.

- Wrote QA test plans for IT deployments and implemented real-time status dashboards using **Power BI**.

- Led documentation standardization for internal system upgrades, improving cross-team collaboration.

**Railway Systems Consultant – Ahab Co. | 2016–2018**

- Supervised NATM and TBM tunneling methods for subway projects  
- Maintained HSE compliance and reporting in urban rail systems  
- Delivered civil reports and system coordination

## Education

* Seneca College – Graduate Certificate in Artificial Intelligence (AIG) Graduate

Relevant Coursework:

• Machine Learning & Advanced Analytics • Prompt Engineering & NLP • Deep Learning & Reinforcement Learning • Robotics Systems (ROS1, ROS2, JetAuto, TurtleSim) • Computer Vision • AI Ethics & Governance • Capstone Project – AI-enabled Pill Detection App Capstone Project – AI-enabled Pill Detection App

* professional Certificate – Computer Systems Technology: January 2020
* MSc, Civil Engineering-Transportation: 2020
* TOEFL Score: 100 – 2024

## Certifications

* **AWS Certified Cloud Practitioner (CLF-C02)** – Cloud Concepts *(Mar 2025)*  
  [Certificate ID: abd9647a68ed05cb0889e5e46f2d69fce181db8c700d71b6ea10123d22779c2f]
* **AWS Certified Cloud Practitioner (CLF-C02)** – Security & Compliance *(Mar 2025)*  
  [Certificate ID: b837427db6ba3fccc400464d16656877187491df5930256275d72fa70eff2bc5]
* **Introduction to Cybersecurity** – *(Oct 2024)*  
  [Technical cyber safety & threat defense foundations]
* **Programming for Everybody (Python)** – University of Michigan *(Dec 2024)*  
  [Coursera Verified: ATXCW3P30DAN](https://coursera.org/verify/ATXCW3P30DAN)
* **Computer Systems Certificate – Ministry of Labor, Iran** *(Score: 96/100)*  
  [Certification Code: 2470/1398/0923 – ICT Technical Skills]