

Education

Alexandria University	2020–2024
BSc in Communications and Electronics Engineering	
NTI	Associate Degree
AWS Cloud Services Management and Operation	

Publications

Latent Action Pretraining Through World Modeling	Submitted to ICRA 2026
Supervised by Prof. Ian D. Reid, Mohamed bin Zayed University of AI (MBZUAI)	

AI Work Experience

Leap Event Technology – AI Engineer	Oct 2025 – Present
United States (Remote)	
<ul style="list-style-type: none"><li>Designed <b>agentic AI automation solutions</b> using Google ADK, OpenAI APIs, and Agents SDK to streamline workflows for events with thousands of attendees and multi-million-dollar budgets.</li><li>Delivered <b>real-time analytics and automated reports</b> enabling data-driven decisions, reducing operational costs and optimizing resource allocation.</li><li>Built <b>evaluation frameworks</b> for AI agents using RAG pipelines and <b>Arize Phoenix</b>, ensuring reliability and observability of production systems.</li><li>Optimized <b>LLM inference pipelines</b> for low-latency multi-step task automation, supporting intelligent decision-making and personalized customer experiences.</li></ul>	
Valeo Graduation Project – Team Leader, AI & Software Engineer	Oct 2023 – Aug 2024
Cairo, Egypt	
<ul style="list-style-type: none"><li>Developed real-time <b>multimodal AI systems</b> for BCI-controlled robotics, integrating vision, signal processing, and sensor data for reasoning and decision-making.</li><li>Optimized <b>TensorFlow models</b> for edge deployment with TensorFlow Lite and <b>CUDA acceleration</b>, achieving <b>78% latency reduction</b> while maintaining accuracy.</li></ul>	
Made in Alexandria (M.I.A) Robotics – AI Mentor & Software Engineer	Aug 2023 – Oct 2024
Alexandria, Egypt	
<ul style="list-style-type: none"><li>Co-founded AI team specializing in <b>computer vision</b> and <b>NLP</b>, mentoring newcomers in AI development.</li><li>Developed control software and GUIs using <b>Node.js</b> and <b>Svelte</b> for <b>ROV/AUV</b> autonomous underwater vehicle systems.</li></ul>	

Key Projects

<ul style="list-style-type: none"><li><b>AI Agent Ticketing System:</b> Built AI-driven system using Django, Google ADK, and MCP to automatically analyze GitHub issues and generate intelligent fix suggestions</li><li><b>GoogleADK Shopping Assistant:</b> Multi-agent AI system analyzing buyer behavior, ranking products, and simulating purchases</li><li><b>Face-to-Face Reenactment:</b> Adapted 3D reconstruction and dense face alignment models for realistic facial expression transfer</li><li><b>Synthetic Review Generator:</b> Controlled synthetic data framework generating GitLab reviews with NLP and LLM validation</li></ul>	
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Technical Skills

<ul style="list-style-type: none"><li><b>AI &amp; ML:</b> PyTorch, TensorFlow, JAX, Hugging Face, LLMs, Multimodal Models, Agentic AI, MCP, RAG</li><li><b>ML Infrastructure:</b> vLLM, Ollama, TensorRT, TensorFlow Lite, ONNX, Triton Inference Server</li><li><b>Distributed Training:</b> PyTorch DDP, DeepSpeed, FSDP, Multi-GPU/Multi-Node Training, Model Parallelism</li><li><b>Optimization:</b> CUDA, cuDNN, Mixed Precision, Gradient Checkpointing, Flash Attention</li><li><b>MLOps &amp; Cloud:</b> AWS (EC2, S3, SageMaker), Docker, Kubernetes, CI/CD, Weights &amp; Biases, Arize Phoenix</li><li><b>Programming:</b> Python, C++, JavaScript, Java, MATLAB, Bash</li><li><b>Web Development:</b> Django REST Framework, React, Node.js, PostgreSQL, MySQL, Vector Databases</li></ul>	
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Additional Experience

Bit68 – Python Backend Developer	Feb 2025 – Oct 2025
Cairo, Hybrid	
<ul style="list-style-type: none"><li>Developed scalable backend services using <b>Django REST Framework</b> for mobile apps, e-commerce platforms, and FMS.</li></ul>	
Creatio Software – Django Full Stack Developer	Oct 2022 – Jun 2024
Australia, Remote	
<ul style="list-style-type: none"><li>Built features for <b>Barcats</b> hospitality platform, implementing ML-based job recommendations and ranking algorithms.</li></ul>	

Honors & Awards

1st place MATE Regional 2024 (advanced to USA), 4th place internationally; 1st place AUV category 2024 Underwater Robotics Challenge, nominated for IROS 2024; 2nd place 2024 NOAA Ocean Exploration Challenge (Computer Vision)	
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