

Mohamed A. Haggag

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Tokyo, Japan

PROFESSIONAL EXPERIENCE

• Founder

July 2025 – Present

Agentis Labs (<https://AgentisLabs.co>)

Global

- Founded Agentis Labs to pioneer **Architecture-First AI**, developing hybrid agentic systems designed to overcome the intrinsic limitations of LLMs.
- Provide three core services: **AI R&D** (agentic architectures, emergent behaviors), **Applied AI Solutions** (system design, PoC development), and **Strategic Consulting** (AI readiness, implementation planning).
- Leverage extensive prior experience applying AI in robotics, autonomous driving, finance, retail, and blockchain to deliver robust, domain-agnostic solutions.

• Head of AI, Executive Member of the CTO Office

Aug. 2023 - July 2025

G.U. Group

Tokyo, Japan

◦ AI Efforts:

- * Leading R&D of internal AI systems, with a focus on multimodal LLM-based capabilities, including:
 1. Development of a multi-model and multimodal agentic system for source code analysis and reverse engineering, enabling the generation of technical and non-technical documents from source code based on user-defined tasks.
 2. Development of a multi-model agentic workflow for enhancing and localizing technical documentation.
 3. Development of an assistive Slack-based agent.
- * Conducting research at the intersection of AI and blockchain technologies, such as AI-enabled wallets.
- * Driving the AI transformation across the organization, enhancing AI literacy in all departments.

◦ Organizational Development Efforts:

- * Formalizing AI-enhanced engineering and production workflows, including the introduction of standardized tools, roles, and procedures across the organization.

• Senior R&D Engineer | Product Manager

July 2017 - July 2023

ZMP Inc.

Tokyo, Japan

◦ Research and Development Efforts (Robotics, Autonomous Systems, Self-driving cars):

- * Performed R&D in the following areas:
 - Perception (Computer Vision, Deep Learning, Semantic Segmentation.)
 - Sensor Fusion and Localization (Probabilistic State Estimation, Tracking, Kalman Filter, EKF, UKF, Particle Filter.)
 - Behavior Prediction (Model-Based Behavior Prediction, Data-driven Behavior Prediction, Naive Base Classifiers.)
 - Path & Trajectory Planning (Hybrid A*, Behavior Planning, Trajectory Generation, Jerk Minimization.)
 - Control (PID, MPC.)

◦ Product Development Efforts (AI & Data):

- * Initiated and led the development of an AI & Data platform product from scratch.
- * Developed and executed the project's vision, strategy, and road-map, from ideation to launch.
- * Managed the development team and led in high-level technical decisions, such as architecture and technology choice.
- * Prototyped various algorithms and AI components for use in the platform.
- * Communicated extensively with multiple teams, from executives to marketing to business, to ensure alignment and success of the platform.

- **Independent AI Advisor & Consultant**

Independent

Jan. 2017 - Present

Global

- Advising and serving startups and businesses in various sectors throughout Asia and the Middle East on the utilization and integration of AI technologies. This includes providing assessments, feasibility studies, and Proofs of Concept (PoCs).
- Advising private institutions and governments on AI strategy and AI transformation.

EDUCATION & ACADEMIC RESEARCH EXPERIENCE

- **Georgia Institute of Technology**

M.Sc. in Computer Science (Specialization: Computational Perception and Robotics)

Aug. 2021 - Aug. 2023

Remote, USA

- **GPA:** 4.00/4.00
- **Relevant coursework:** Artificial Intelligence, Natural Language Processing, Artificial Intelligence for Robotics, Cyber-Physical Design and Analysis, Graduate Algorithms, Network Science.
- **M.Sc. Research Project:** Advanced Connectome Classification for Neurological Disorder Diagnosis (Network Neuroscience X AI)

- **University of Tokyo**

Postgraduate Researcher

Apr. 2015 - Mar. 2017

Tokyo, Japan

- Conducted research and contributed to an ongoing humanoid robot project at the "Intelligent Systems & Informatics Laboratory" by designing controllers, programming robots, and proofreading papers.

- **University of New South Wales (UNSW)**

Research Assistant

Mar. 2014 - Sept. 2014

Remote, Australia

- Participated in a research project in mathematical control engineering, resulting in two publications. Please refer to the **Publications** section for details.

- **Information Technology Institute (ITI)**

Postgraduate Diploma in Mechatronics (Professional M.Sc.)

Oct. 2012 - Jun. 2013

Giza, Egypt

- **Graduation Project:** Non-Prehensile Manipulation Control of Multi-Link Articulated Objects: Developing Two Anthropomorphic 3-DOF Robot Arms.

- **Mansoura University**

B.Sc. in Electrical Power and Machines Engineering

Sep. 2007 - Jul. 2012

Mansoura, Egypt

- **GPA:** Very Good with Honors Degree, ranked 9th (Top 3%).
- **Graduation Project:** Flexible Mobile Automation: Developing a Semi-Autonomous Mobile Robotic Platform for Industrial Applications

PUBLICATIONS

- **Main Contributor**, "INCLUDE: Evaluating Multilingual Language Understanding with Regional Knowledge," Submitted to the 13th International Conference on Learning Representations (ICLR), 2024.
- **M. A. Haggag**, "Rolling Output Generation (ROG): LLM Design Pattern for Unrestricted Output Length," Technical Report, 2024. Available at: <https://github.com/mo-haggag/ROG>
- M. A. Mabrok, **M. A. Haggag**, and I. R. Petersen and A. Lanzon, "System identification algorithm for negative imaginary systems", International Journal of Applied and Computational Mathematics, 14(3), 2015.
- M. A. Mabrok, **M. A. Haggag**, I. R. Petersen and A. Lanzon, "A Subspace System Identification Algorithm Guaranteeing Negative Imaginary Property", " 53rd IEEE Conference on Decision and Control, Los Angeles, CA, 2014, pp. 3180-3185.

PUBLIC TALKS

- **LLMs Without Jargon**

May 24, 2024

Tokyo AI

- Presented an end-to-end dissection of large language models, explained in an intuitive, non-expert-friendly manner. The talk culminated in a "big reveal," mapping the discussion back to technical jargon, providing attendees with a comprehensive understanding of LLMs.

- **LLMs as Universal Domain Translators**

October 29, 2024

Tokyo AI

- Presented a personal research project exploring "Universal Domain Translation" (UDT) in large language models, an emergent ability that reveals connections between seemingly unrelated domains, originally motivated by the challenge of cross-domain learning.

SKILLS

- **Specialized Areas:**

- Robotics AI, Classical AI, and Data Analysis and Visualization
- Prompt Engineering, Fine-Tuning, and Building with Local and Cloud-Based LLMs (Gemini, OpenAI, Anthropic)

- **Programming Languages:** Python (advanced), MATLAB (familiar), C/C++ (familiar)

- **Frameworks & Libraries:** Jupyter, scikit-learn, Pandas, NetworkX, Matplotlib, PyTorch, and more

- **Version Control:** Git, GitHub, GitLab

- **Cloud Technologies:** GCP

- **Product Management:** Market Research, Product Conception, Requirements Definition and Analysis, Product Strategy, Product Roadmap, Product Development Planning, Business Modeling, Pricing Models, UI/UX, Cross-functional Communication

PROFESSIONAL CERTIFICATIONS

- **Self-Driving Car Engineer Nanodegree**

Feb. 2019

Udacity

HONORS AND AWARDS

- **Japanese Government (Monbukagakusho) Scholarship**

Mar. 2015 - Mar. 2017

University of Tokyo

- Awarded the prestigious Monbukagakusho scholarship by the Japanese Ministry of Education, Culture, Sports, Science and Technology.

- **ITI's Professional 9-month Diploma Program Scholarship**

Oct. 2012 - Jul. 2013

Information Technology Institute (ITI)

- Awarded the highly selective ITI's Professional 9-month Diploma Program Scholarship targeting top recent graduates, with 7% acceptance rate at the time.

- **Academic Excellence Financial Award**

Sept. 2007- Jun. 2012

Mansoura University

- Awarded the annual merit-based Academic Excellence Financial Award for top-performing students for 5 consecutive years.

ADDITIONAL INFORMATION

- **Languages:**

- **Arabic:** Native
- **English:** Fluent
- **Japanese:** Intermediate