

HUSAIN AL-MOHSEN

STRATEGIC AI INFRASTRUCTURE EXECUTIVE

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AI infrastructure executive & Founder who built **enterprise-critical technology systems** generating \$800M+ in business value. Established AI capabilities that scale globally while maintaining **security and regional compliance**. Experienced presenting technology strategy to boards and C-suites of Fortune 100 companies. 26+ patents connecting theoretical innovation with commercial applications. MIT PhD with deep understanding of technology priorities of diverse industries and cross-border partnerships.

RECENT LEADERSHIP

ChromeBird AI, Founder

2025–Now

- **Set out to solve the "million+ lines of code" understandability problem** by creating an exciting product that objectively measures, estimates, and explains software.
- **Secured early clients** and launched live product experience at app.chbird.ai.
- **Exploring other opportunities** following the conclusion of fundraising efforts.

VitalSpark, Strategic AI Advisor

2025–Now

- **Guiding AI strategy and architecture** for scalable solutions addressing the \$4T motivation crisis.

Walmart Advanced Systems & Robotics, Director of AI, ML/Vision & Data Science

2023–2025

- **Directed AI strategy for 400 automated super center fulfillment hubs**, reporting weekly to the C-suite on the scaling of systems processing over \$2.5B in monthly volume.
- **Built and led elite AI team** that engineered patented vision and LLM solutions delivering 10x speed improvements and 10x error reduction, generating \$40M+ annual savings.
- **Engineering Highlights:** Deployed LLM Agents and query routers; engineered low-latency edge robotic vision; optimized massive-scale simulation environments for fleets of 1,000+ robots.

Symbotic, Director of Machine Learning

2021–2023

- **Delivered \$45M+ in documented savings** by reducing human intervention rates 10-fold (from 1/1k to 1/10k picks) through AI-powered automation.
- **Engineered and deployed the core AI system** governing a fleet of tens of thousands of robots processing 8-12% of US retail distribution.
- **Provided technical leadership for 14-person team** establishing DevOps best practices for **Edge Nvidia** systems on **25 mph** robots; pioneered synthetic data generation and data management pipelines.
- **Engineering Highlights:** Created the warehouse industry's best case manipulator by merging 1D/2D/3D sensors via Deep Learning; implemented RAFT-Stereo and shared memory IPC for real-time control.

iRobot, Manager, ML Modeling & Principal Data Scientist

2017–2021

- **Led development of Roomba J7's PrecisionVision system from prototype to final product**, building the dedicated ML team whose technology detects and avoids obstacles with <0.1% error rate, driving \$260-780M revenue.
- **Presented to CEO semi-weekly** and successfully pitched vision-enabled robot to board, driving **strategic technology selection** for the company's future AI roadmap.
- **Established global distributed data processing architecture** handling petabyte-scale analytics for worldwide robot fleets.
- **Engineering Highlights:** First implementation of Deep Learning at iRobot; architected **AWS** cloud infrastructure for fleet analytics; pioneered embedded vision on low-compute edge devices.

INTERNATIONAL LEADERSHIP & OTHER EXPERIENCE

PROFESSIONAL SPEAKER & TRAINER | 2015-PRESENT

- **Delivered technical training** on software engineering, modeling, and AI applications

ENTREPRENEURSHIP | Co-Founder & CTO, Syphir LLC |

2008-2010

- **Co-led winning team** in MIT Arab Business Plan Competition
- **Secured seed funding** and built commercial product with paying customers

STRATEGIC PARTNERSHIPS | PhD Student, MIT |

2009

- **Organized critical faculty trip** that catalyzed subsequent MIT-Saudi collaborations worth ~\$50M
- **Negotiated delegation composition** of 20 MIT faculty visiting Saudi Arabia
- **Facilitated connections** that later grew into multiple research centers and fellowship programs

CONSULTING ENGINEER | Saudi Aramco |

2003–2004, 2010–2012

- **Final technical authority** for 380+ gas turbines supporting Saudi Arabia's energy production
- **Optimized critical infrastructure** essential to national economic security
- **Led cross-cultural technical teams** balancing Western expertise with regional requirements

ADDITIONAL HIGH-IMPACT EXPERIENCE

- **EnerNOC, Data Scientist** – Secured energy ML patents; scaled **high-velocity energy analytics pipelines**; collaborated research with WPI, MIT & Harvard.
- **Automation Tech Lead & Sr. SWE @ Vecna | 2011–2014** – Spearheaded company-wide test automation and DevOps for a major hospital-management suite, and built a high-performing four-engineer team.
- **Google, APM Intern** – Engineered datacenter forecasting; explored pricing models; invented a Chrome UI feature.

INNOVATION PORTFOLIO: PATENTS, RESEARCH & LEADERSHIP

- **26+ Strategic Patents:** Spanning **Secure Computing, AI, and Robotics**, including the core vision logic for Roomba J7 and national-scale energy grid control systems.
- **Scientific Publications:** Authored foundational research on **Computational Physics** and **Monte Carlo Algorithms** at MIT, creating novel variance-reduction techniques for complex system simulation.
- **Global Thought Leadership:** Frequent invited speaker and technical trainer, delivering expert sessions on Applied AI and Software Architecture to academic and industry audiences.

EDUCATION

- **PhD in Engineering** - Massachusetts Institute of Technology with Minor in Entrepreneurship and Management (2010)
- **Master of Science** - Massachusetts Institute of Technology (2003)
- **BS, Mechanical Engineering** - KFUPM, Saudi Arabia (1998)