

# HUSAIN AL-MOHSSEN

## 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](http://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

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### 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

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- 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

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- 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)