MOHAMAD **GHAZI** RAAD

DIGITAL TECH **INNOVATOR**

COMMUNITY ENGAGEMENT

Founder & Director, GrassRoot Development CIC (UK, Ongoing)

- Launched and lead a community interest company supporting charities and SMEs with digital transformation—offering website development, POS systems, cybersecurity, and digital mentorship.

STEM Mentor & Tech Educator (London Impact Academy, Sophie School, LIA, Ongoing)

- Deliver interactive talks, workshops, and hands-on sessions across UK schools to inspire young people in web development, design, and emerging technologies; mentor local tech talent initiatives and run tabletop tech and gaming events to foster inclusive, safe learning spaces.

Cybersecurity Advocate (Milton Keynes, Ongoing)

- Designed and led practical cybersecurity workshops for local small business owners to boost digital safety and awareness.

Volunteer, Friends of Upminster Windmill (London, Ongoing)

- Supported technology integration for digital museum exhibits, contributed to CFD research, and participated in legislative and preservation efforts using digital twins and simulation.

PROFESSIONAL SUMMARY

Multidisciplinary digital technology engineer working across telecoms, software engineering, data systems, AI/ML, hardware integration and infrastructure design, adapting to what is required from architecting full-stack applications, building data pipelines, fine-tuning intelligent models or ensuring hardware and infrastructure operate reliably when scaled up.

At AQA, I developed a custom processor to analyse exam scripts via OCR and image detection, automating a previously manual process. This solution increased accuracy by 300%, reduced costs, and significantly improved operational efficiency. In data engineering, I created predictive analysis tools that flagged maintenance workflows, enhancing throughput, improving customer satisfaction and saving costs by enabling proactive interventions.

In AI/ML, I contributed to Dar's Smart Bridge project by applying generative design, topographical optimization through ML models. This led to reduced material use, enhanced safety and improved structural performance, while promoting sustainability through recycled materials and lower carbon output. In hardware systems at Cranfield, I developed a novel sensor to monitor engine conditions in real time, helping improve carbon efficiency and reduce load, heat stressors and vibration. My DevOps and systems engineering work includes improving infrastructure reliability and uptime through independent projects, where I optimise system performance via better configuration, monitoring and troubleshooting.

COLLABORATIONS

Cornell University, USA, 2022-2023
Worked on ML-based atomic simulations to improve metallic properties
Contributed to research that aligns with the UK's innovation goals in research Collab

Cranfield University, UK, 2021+
Working on a digital twin open source platform that provides tools to modernize UK SMEs and improve research of digital management suite in the UK
Led on various projects improving digital warehousing, educational tools and research development in the UK

The WordWave - AI-Powered Content Platform, Saudi Arabia, 2023+
Led platform rebuild with Azure-based microservices and agentic AI workflows
Integrated AI for client interaction, content matching, QC, and publishing
Outcomes: 40+ writers, 60+ clients, 100+ jobs, $100K+ GMV in 2024; positioned for MENA market expansion

Al Rabyah - Smart Property & Maintenance Platform, 2019+
Delivered end-to-end digital platform with tenant apps and IoT-based monitoring
Migrated from POC to full production on Heroku and OpenStack

PTI, Cloud-Based SaaS for Warehousing & Logistics, 2017+
Built AI- and IoT-enabled microservices platform with barcode/RFID tracking
Deployed predictive models and digital twins for inventory and logistics planning
Created dashboards with Metabase and Grafana; collaborated with Microsoft & Qualcomm

AWARDS AND CERTIFICATIONS

- Digital Twin for Senior Leaders certification
- Cranfield University, Director's prize for outstanding work, effort and achievement
- Stem ambassador inspiring young people by sharing real-world STEM experiences in schools and colleges, breaking stereotypes, and encouraging the next generation to pursue STEM careers
- Digital hub ambassador promoting collaboration and best practices in digital twin technology, providing a shared framework and community for advancing trustworthy digital twin adoption across industries in the UK.
- Microsoft Azure: AZ-900; AI-900; DP-900
- Microsoft & LinkedIn: Career Essentials in Generative AI
- NVIDIA DLI: Accelerated Computing, CUDA C/C++ (incl. concurrent streams, multi-GPU), CUDA Python, OpenACC, Nsight profiling
- UNICEF Agora: Tech & Ethics, Responsible Innovation; Data Responsibility & Protection; Technology for Emergencies; Digital Skills: AI
- AQA's Step up and results Matter Award Winner

PROFESSIONAL MEMBERSHIPS

- Member, Institution of Engineering and Technology (IET)
- Member, Syndicate of Engineers and Architects
- Member, Woodland Trust

PROFESSIONAL EXPERIENCE

Senior Innovation Engineer in Assessment Technology
AQA, UK, 2024+

- Founded an internal AI panel on agentic workflows, upskilling teams and setting the roadmap for safe, high-impact AI use.
- Built an ML-based certification processing service that saved £1.5M+ and improved operational turnaround.
- Led automation and AI across core assessment and certification platforms, modernising tools used by teachers and markers and removing manual steps.
- Worked cross-functionally to support access for 300,000+ new learners, aligning capacity, compliance, and tech delivery.
- Brought Siemens in to assess and support AQA's digital warehousing transformation, covering workflow design and systems integration.
- Contributed to international growth planning, preparing the technical entry approach for the Oman education market.
- Designed for scale: containerised services on Azure with CI/CD and IaC, clear SLOs, and cost controls to move pilots into production.
- Set deployment and MLOps practices (telemetry, versioning, audit trails, accuracy checks) for reliable model releases.

Lead Telecom Engineer in System Design and Development
Dar - Sidara Engineering, Beirut, Lebanon, 2017-2021

- Designed and development large-scale projects focusing on Hospitality, Healthcare, Airports and Large Scale Tech Infrastructure Projects in Middle East, covering ICT, Security, SCADA, Multimedia Solution/Audiovisual, Structure Cable Networking, Data Centre and Cloud AI solutions
- Developed data analytics tools to monitor project progress and automations to the design process, optimizing resource allocation and timeline adherence
- Developed an internal costing database to reduce projects' budgeting efforts by 50%
- Designed and reviewed ICT, Security, ELV systems and installations, network modeling, and analysis and maintained, updated and automated documentation for telecommunication systems and equipment inventory
- Developed pre-concept briefs for various assets such as Tech and Digital hubs, entertainment centres and hospitality complexes
- Lead the technology and digital advisory role for Dar's consultancy services (NEOM).

Intern
CISCO, Oman, 2016

- **C**CNA certification. Internet Security and preventative algorithms design setting up routers, switches, complex networks and VOIP.

EDUCATION

The Oxford Artificial Intelligence Summit 2025: Autonomous AI Agents
University of Oxford, UK, 2025

- Participating in a hands-on summit focused on the design, deployment and evaluation of autonomous AI agents. The topics included agentic workflows, low-code and full-code development using OpenAI, LangChain, and LlamaIndex as well as best practices for real-world AI implementation. Achieved design of telecom onboarding customer multi agent AI that aligns with UK innovation goals.

LANGUAGES

- English
- Arabic
- French

CONTACT

+44 7943928988

mohamad@ghaziraad.com

Milton Keynes, United Kingdom

https://ghaziraad.com/

https://www.linkedin.com/in/ghazi-raad/

Digital Twins for Senior Leaders
Cranfield University, UK, 2025

- An executive course for tech leaders and tech leaders of the future focused on applying digital twin technologies for digital transformation and organisational change. Developed competency in digital twin architecture, system modelling, IoT data pipelines, real-time analytics, predictive maintenance, and cloud-based deployment strategies.

MSc in Automotive Engineering and Transport Systems
Cranfield University, UK, 2022-2023

- Focused on digital manufacturing, automation, and advanced AI data analytics for modern mobility systems
- Gained expertise in model-based control, vehicle and powertrain simulation, and electrified propulsion systems

- Applied computational fluid dynamics (CFD) to optimize vehicle aerodynamics and thermal management
- Worked on embedded systems and automotive-grade sensor integration
- Collaborated with the automotive department on industry-aligned R&D projects involving real-world systems leading to an award winning research collaboration with Cornell University
- Developed practical and theoretical skills in system design, control, and performance evaluation

Pre-masters : Aerospace Engineering
Cranfield University, UK, 2021-2022

- Studied core engineering subjects including C/C++ programming, CAD, numerical methods, linear algebra, calculus, and finite-element analysis
- Gained practical skills in engineering simulation, system modelling, and applied mathematics
- Developed research methodology competencies for technical investigation and reporting
- Researched the impact of alternative fuels on engine lifespan, focusing on hydrogen combustion through simulations and physical testing and reliability and performance factors influencing hydrogen engine design and maintenance

Bachelor of Computer Communication Engineering
American University of Beirut, Lebanon, 2013

- Built a strong foundation in algorithms, development, data structures, operating systems, computer networks, cryptography, and AI fundamentals
- Developed a drone and mobile app system enabling autonomous quadcopter navigation to users via WiFi/WiFi-Direct mesh networking
- Applied embedded systems and real-time communication protocols in a multidisciplinary final-year project combining hardware and software
- Gained practical experience in digital and VLSI design, signal processing, and RF/mobile communications