

### Renewable Energy Solutions



### Hydrometric & Environmental Solutions



### Aerospace and Aviation Solutions



### Education & Training Solutions



### Operation, Maintenance and Rehabilitation



### AI & Cybersecurity Solutions

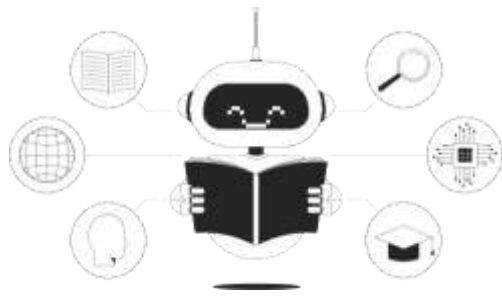


# FIRAS BALASMEH CORPORATION FOR CONTROL SYSTEMS "FB GROUP"

AI & Cybersecurity Solutions

- Renewable energy solutions
- Hydrometric & Environmental solutions
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# AI & CYBERSECURITY SOLUTIONS WE WILL FIND A SOLUTION, OR CREATE ONE'

## 1. Introduction

### 1.1 About Us

Firas Balasmeh Corporation for Control Systems "FB GROUP" is a Jordanian corporation that has been proudly serving the region since 2010. Headquartered in Jordan, FB GROUP is a dynamic organization that operates with a strong commitment to excellence and innovation in the fields of technology and engineering.



Turnkey  
Solutions



Design and  
Engineering



Supply and  
Installation



Commissioning  
and Testing



Training and  
Support



Operation and  
Maintenance

Our team is composed of highly experienced and multi-disciplinary engineers who bring a wealth of knowledge and expertise to every project. As a leading system integrator, FB GROUP specializes in delivering comprehensive services that help businesses and organizations connect with top-tier vendors, providing reliable and high-quality hardware, software, and professional services.

### 1.2 Vision

To be the trusted partner for businesses and organizations seeking innovative, reliable, and sustainable solutions in engineering, artificial intelligence, automation, energy, and environmental management. We are dedicated to driving progress and delivering exceptional value through our comprehensive suite of services.

FB Group is more than a service provider; we are a partner in your success, working alongside you to turn challenges into opportunities and goals into achievements.

### 1.3 Our Mission

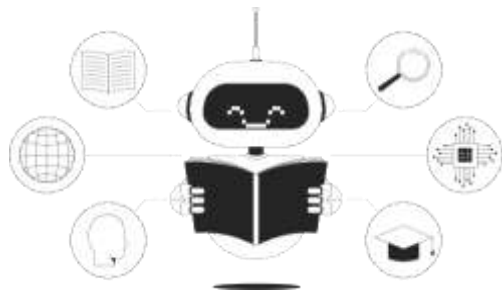
To deliver superior solutions that meet the diverse needs of our clients, ensuring that every project is executed with precision, efficiency, and a focus on long-term success.

### 1.4 Our Objective

To be the leading provider of innovative, sustainable, and integrated engineering solutions in the Middle East, delivering unmatched value to clients across multiple sectors through cutting-edge technology, exceptional service, and a commitment to environmental and social responsibility.

We aim to drive growth and innovation while fostering long-term partnerships and contributing to the sustainable development of the communities and markets we serve.

This objective emphasizes FB GROUP's commitment to leadership in innovation, sustainability, and customer value, while also highlighting its dedication to social and environmental responsibility. It aligns with the group's diverse capabilities and its vision for growth and impact in the region.



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## 1.5 What We Value

- **Innovation**  
We are a company that keeps its promises.
- **Integrity**  
We exceed customer expectations through continuous improvement in quality, service, productivity and time compression.
- **Excellence**  
We provide our people with the tools, training and support to achieve excellence in customer satisfaction.
- **Sustainability**  
Which we seek in every element of our business.
- **Collaboration**  
We actively recognize the central role we occupy in the structure of society to improve the quality of life and the environment of a broad community.
- **Customer Focus**  
Our clients are at the center of everything we do. We listen to their needs, understand their challenges, and tailor our solutions to ensure their success and satisfaction.
- **Continuous Improvement**  
We are committed to continuous improvement, always learning, adapting, and evolving to stay ahead in a rapidly changing world, and to deliver the best possible outcomes for our clients.

## 1.6 What We Do

At FB GROUP, we are dedicated to delivering comprehensive, innovative solutions across a wide range of industries, with a focus on engineering excellence, environmental sustainability, and technological advancement. Our services are designed to meet the diverse needs of our clients, ensuring that we provide not only high-quality products but also the expertise and support necessary to achieve success in every project.

### 1. Engineering Services

We provide end-to-end engineering solutions, including design, consultancy, project management, and implementation. Our multidisciplinary team of engineers specializes in creating custom solutions tailored to the unique requirements of each project, from concept to completion.

### 2. System Integration

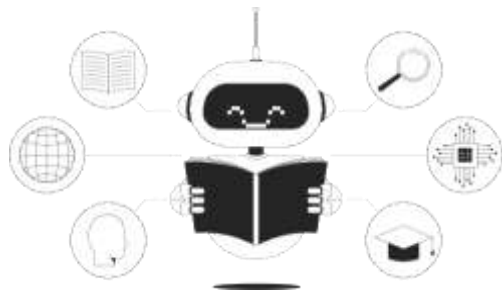
As a leading system integrator, we deliver seamless integration of advanced technologies in control systems, automation, and industrial processes. We ensure that our clients benefit from efficient, reliable, and scalable systems that optimize performance and productivity.

### 3. Turnkey Projects

We deliver fully integrated turnkey solutions, managing every aspect of a project from initial design and engineering to procurement, construction, commissioning, and operation. Our turnkey approach ensures that projects are completed on time, within budget, and to the highest standards of quality.

### 4. Training and Support

We provide specialized training programs and ongoing support to ensure our clients have the knowledge and skills needed to operate and maintain their systems effectively. Our training services cover a broad range of disciplines, empowering clients to maximize the value of their investments.



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### 5. Consulting and Advisory Services

Our expert consultants offer strategic advice and technical guidance to help clients complex challenges, optimize operations, and achieve their business objectives. We work closely with clients to develop tailored solutions that address specific industry needs.

### 6. Supply of High-Quality Products

We source and supply a wide range of high-quality hardware and software products from leading manufacturers around the world. Our product offerings are selected to meet the stringent requirements of our clients, ensuring reliability, performance, and longevity.

### 7. Environmental and Sustainability Services

Committed to environmental stewardship, we offer services that promote sustainability, including environmental impact assessments, resource management strategies, and implementation of green technologies. Our goal is to help clients achieve their sustainability targets while enhancing operational efficiency.

### 8. Renewable Energy Solutions

FB Group is at the forefront of the renewable energy sector, offering comprehensive services in the design, installation, and management of solar, wind, and hybrid energy systems. Our commitment to sustainability drives us to provide energy solutions that reduce environmental impact while enhancing energy security.

### 9. Hydrometric & Environmental Solutions

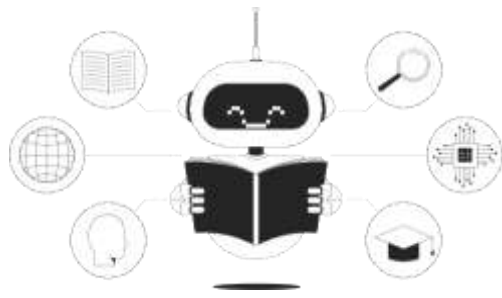
We specialize in hydrometric monitoring, environmental data management, and consulting services that help our clients manage natural resources responsibly. Our solutions enable accurate measurement and analysis of water resources, air quality, and environmental impact, supporting informed decision-making.

### 10. Aerospace and Aviation Solutions

We provide cutting-edge Airspace and Aviation Solutions designed to enhance the safety, efficiency, and reliability of aviation operations. Our expertise spans a broad range of services and technologies, ensuring that our clients in the aviation industry can meet the Highest standards of performance and compliance.

### 1.7 Our Core Business Lines





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### **2. AI & Cybersecurity**

#### **2.1 Introduction**

Artificial Intelligence Unit is the first Jordanian company – and among the earliest in the Middle East – to design, engineer, and deploy fully integrated artificial intelligence solutions in compliance with international standards, national data-sovereignty frameworks, and enterprise-grade engineering practices. The Unit stands as a regional pioneer, demonstrating that world-class AI systems can be developed in Jordan by Jordanian expertise.

The Artificial Intelligence Unit specializes in engineering advanced AI platforms and applications that enable governments, armed forces, educational institutions, and public and private sector organizations to transition toward intelligent, secure, and data-driven ecosystems. Our solutions are designed to deliver measurable impact by combining machine learning, predictive analytics, automation, and secure data architectures within nationally compliant frameworks.

The Unit's flagship solutions include AI-driven educational systems such as SmartClass, advanced psychometric assessment and training platforms including SaiTest and PsyMaster, intelligent automation and robotics solutions for civil and military applications, AI-enabled drone and smart vehicle systems, and innovative cybersecurity and data-protection technologies. In addition, the Unit has developed the region's first Jordan-built personalized learning engine, reinforcing its leadership in localized, sovereign AI innovation.

Through its comprehensive portfolio – spanning education, training and development, automation and robotics, cybersecurity, enterprise AI tools, and professional AI capacity building – the Artificial Intelligence Unit delivers scalable, secure, and future-ready solutions that enhance productivity, operational efficiency, and strategic decision-making across critical sectors.

#### **2.2 What We Do**

The AI & Cybersecurity Unit delivers secure, scalable, and intelligent solutions that support digital transformation and operational excellence across key sectors:

##### **Education and Training**

- AI-driven education and training solutions that enhance learning outcomes, workforce readiness, and institutional performance.

##### **Sustainable Development**

- AI-powered solutions supporting human capital development, productivity improvement, and data-driven planning aligned with national sustainability goals.

##### **Defense**

- Advanced AI solutions for defense and security applications, supporting analysis, training, automation, and secure decision-making environments.

##### **Technology and Innovation**

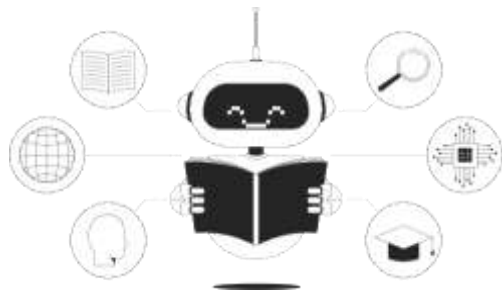
- Application of advanced artificial intelligence technologies to modernize systems, drive innovation, and enable future-ready digital capabilities.

##### **Automation and Business Intelligence**

- AI-based automation and analytics solutions that optimize processes, improve efficiency, and support data-driven decision-making.

##### **Technological Integration**

- End-to-end integration of AI and cybersecurity solutions with existing systems, ensuring interoperability, scalability, and compliance.



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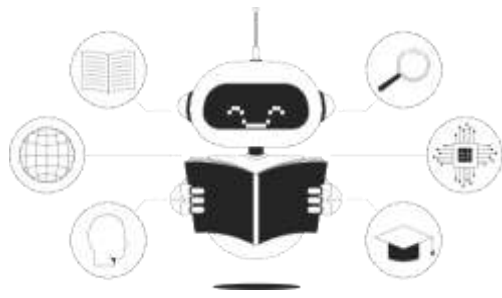
## 2.3 Our Solutions



### 1. Solutions for People and Learning



- Educational Solutions**  
 AI-driven educational solutions that support personalized learning, performance monitoring, and data-driven academic decision-making for schools and universities.
- Training and Development Solutions**  
 Advanced AI-based assessment and training solutions designed to enhance skills development, workforce readiness, and institutional performance across public, private, and defense sectors.
- Professional Training on the Use of AI Tools**  
 Specialized training programs for beginners, intermediate, and advanced users, based on practical applications of artificial intelligence tools and models, including large language models, across various sectors.



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### 2. Solutions for Technology and Business



#### Automation and Robotics Solutions

- Design and deployment of intelligent automation systems that include the development of smart robots for civil and military applications, AI-supported solutions for aircraft, vehicle, and machinery maintenance, advanced drone systems serving both military and civilian purposes, and smart vehicle automation platforms enabling smart driving licenses and AI-supported driver training and evaluation.

#### Cybersecurity and Data Protection Solutions

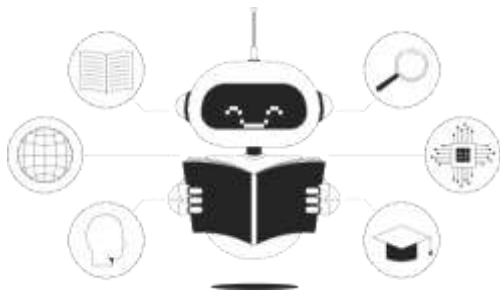
Innovative, modern cybersecurity solutions designed to protect institutional and individual data, ensuring confidentiality, integrity, and compliance with national and international standards.

#### AI Solutions for Advanced Businesses and Projects

- AI-powered solutions for human resources and administrative functions, aimed at accelerating operations, improving productivity, and enhancing organizational competitiveness.

#### Robotic Process Automation (RPA) Services

- We provide Robotic Process Automation (RPA) solutions that streamline repetitive, rule-based business processes and improve operational efficiency. By automating tasks such as data entry, file handling, reporting, and system integrations, we help organizations reduce errors, save time, and focus their resources on higher-value activities. Our RPA services are designed to integrate seamlessly with existing systems, delivering scalable, reliable, and cost-effective automation tailored to business needs.



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### 2.4 Our Projects

#### 1. Educational Project – SmartClass Application

SmartClass is an advanced, AI-driven educational platform designed to transform teaching and learning experiences across public and private schools in Jordan. The platform leverages artificial intelligence to deliver hyper-personalized learning pathways while enabling structured and secure collaboration among students, educators, administrators, and parents. SmartClass is fully aligned with Jordan's educational priorities, cultural values, and national regulatory frameworks, ensuring compliance while driving measurable improvements in academic performance and institutional excellence.



The SmartClass ecosystem is composed of specialized, role-based modules that address the needs of all stakeholders within the educational process:

##### SmartClass for Teachers

- Provides an intelligent teacher dashboard offering performance analytics across cognitive, psychomotor, and affective learning domains. The platform supports lesson planning, assessment creation, differentiated instruction, and the integration of Jordanian cultural values into pedagogical practices, enabling teachers to make data-driven instructional decisions.

##### SmartClass for Students

- Delivers curated lesson plans, interactive learning modules, and gamified educational activities tailored to each student's real-time proficiency level. The system continuously adapts content and assessments to support mastery, engagement, and individual learning progress.

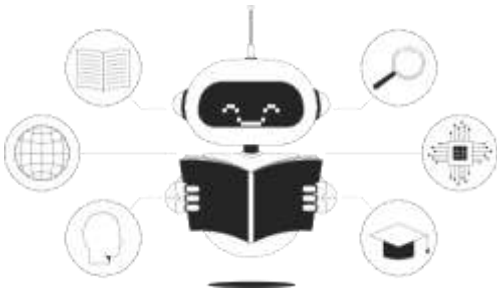
##### SmartClass for Managers

- Offers institution-wide dashboards for performance benchmarking, teacher effectiveness analysis, and strategic academic planning. School and university management can use data-driven insights to improve institutional performance, allocate resources efficiently, and enhance educational outcomes.

##### SmartClass for Parents

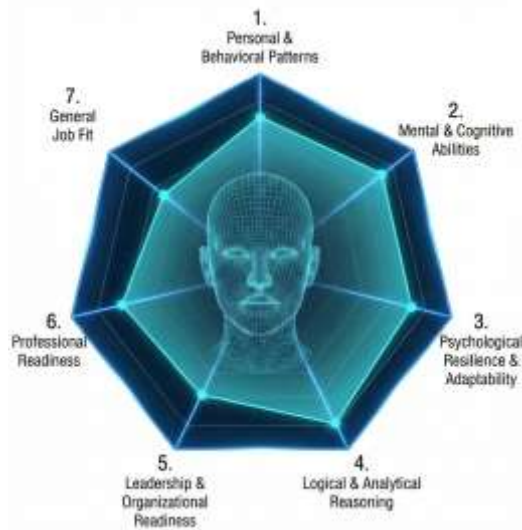
- Enables transparent tracking of student progress through personalized dashboards. Parents receive tailored engagement recommendations and collaborative tools that strengthen communication with educators and support learner development at home.

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## 2. SaiTest – The Revealed Potential

SaiTest is an AI-psychometric assessment and personalized learning solution designed to analyze standardized psychometric tests, including MBTI, Big Five, and learning styles. The platform uses artificial intelligence algorithms to measure multiple dimensions such as personality types, multiple intelligences, memory, attention, creativity, cognitive abilities, emotional intelligence, psychological and behavioral patterns, leadership traits, decision-making abilities, and work-situation handling.

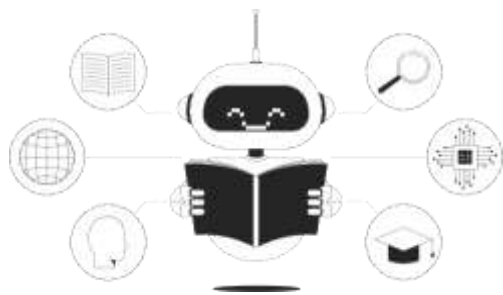


The solution includes an adaptive training platform that delivers personalized learning pathways which dynamically adjust according to user characteristics and skill levels. The platform offers scalable and modifiable training tracks, including Self-Confidence, Relationship Strengthening, and Professional Success, with training modules covering confidence building, emotional intelligence, communication, leadership, time management, conflict resolution, negotiation, strategic thinking, and stress management.

## 3. Sustainable Development Solutions – Istdama AI Platform

The Istdama AI Platform is a Sustainable Development Program presented by FB group. The program aims to revolutionize skills and personal attribute assessment methodologies and the design of training pathways in Jordan. It targets school and university students, as well as employees in the public, private, and military sectors. The program leverages two core AI-driven platforms to shift training approaches from traditional gap-filling models toward building essential behavioral and skill competencies. This approach focuses on developing qualified individuals capable of leading the future, emphasizing creativity and practical capabilities rather than reliance on academic certificates alone.





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### 4. GHRS – Greenhouse Rover System

The GHRS (Green House Rover System) is an autonomous agricultural robot designed to support precision agriculture within greenhouse environments. The system was developed to address key challenges in controlled-environment farming, including early detection of plant diseases, continuous crop health monitoring, and autonomous navigation without human intervention.

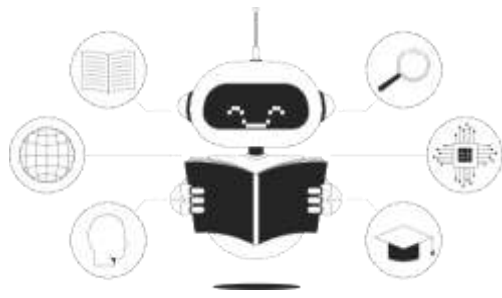


GHRS is a mobile, self-driving robotic platform utilizing a differential drive system with four motors, capable of operating in manual, semi-autonomous, and fully autonomous modes. The robot navigates greenhouse environments using a combination of SLAM-based mapping and path planning, supported by LiDAR, IMU, depth-sensing, and visual cameras to enable accurate localization, obstacle avoidance, and movement in dynamic conditions.

The system follows a structured operational pipeline consisting of environmental sensing, data processing, and actuation. Sensor data is collected through LiDAR, IMU, depth sensors, GPS, and cameras, then processed using artificial intelligence techniques including computer vision and machine learning to analyze plant imagery and classify more than 38 types of plant diseases. Based on this analysis, the robot autonomously plans optimal paths and executes movement and inspection tasks in real time.

GHRS integrates a live monitoring and control interface that displays camera feeds, disease detection results, system status, and operational alerts, enabling real-time supervision and intervention when required. The platform is powered by a solar energy system with battery storage, providing an environmentally sustainable and continuous operating capability suitable for greenhouse conditions.

The system is designed with safety and reliability features including obstacle avoidance, emergency stop functionality, error monitoring, and controlled speed limits. GHRS supports applications in greenhouse farming, open-field agriculture, research data collection, and educational use, serving as a practical demonstration of autonomous robotics, AI-driven analysis, and sustainable agricultural technology.



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### 5. Helicopter AI-Assisted Maintenance Training Platform (Weaponized)

The Helicopter AI-Assisted Maintenance Training Platform is a military-grade maintenance training support system developed to assist maintenance units operating light attack and reconnaissance helicopters. The platform is designed exclusively for maintenance training purposes and does not provide flight training, mission simulation, or operational instruction.



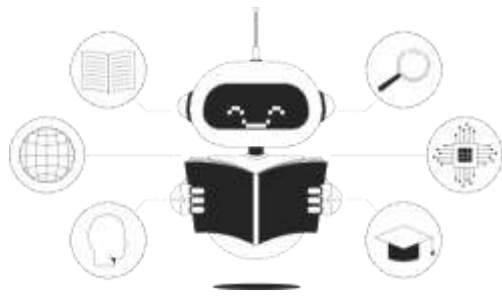
The system delivers a high-fidelity, interactive 3D maintenance environment that accurately represents the physical configuration of operational helicopters. This environment enables maintenance personnel to build procedural familiarity and technical readiness while operating strictly within approved military aviation maintenance frameworks and regulations.

The platform is engineered in full compliance with OEM maintenance manuals, Military Technical Orders (TOs), and EASA / FAA-recognized maintenance documentation where applicable. A strict zero-deviation policy is enforced, ensuring that no procedures, values, warnings, or sequences are altered, and that no unapproved or inferred data is introduced.

Artificial intelligence within the platform is used in a non-interpretive role and functions solely as a semantic indexing and retrieval layer. AI capabilities are limited to locating and displaying exact references, paragraphs, figures, and diagrams from approved technical documentation. All interpretation, decision-making, and maintenance authority remain exclusively with qualified human technicians and supervising personnel.

The platform supports the maintenance training lifecycle by reinforcing standardized workflows (Identify → Inspect → Repair → Verify), enabling procedural familiarization prior to interaction with live aircraft, and allowing instructors to monitor task progression and trainee readiness. The system does not issue certifications or replace approved training centers or regulatory authorities.

Core capabilities include an interactive 3D maintenance digital twin of a weaponized rotary-wing aircraft, documentation-anchored technical reference retrieval, advanced visualization tools such as X-ray views for internal structures, and strict segregation of maintenance content by aircraft type. The system is built on a modular architecture that allows for future expansion to additional aircraft types, subject to regulatory approval and availability of authorized technical data, while maintaining full compliance with aviation maintenance governance principles.



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### 2.5 Advantages

#### 1. End-to-End In-House Solutions

Covering the entire lifecycle from design and development to deployment and support.

- Design
- Development
- Support

#### 2. Proven Multi-Sector Expertise

Delivering solutions for education, defense, cybersecurity, and enterprise automation.

- Education
- Cybersecurity
- Defense
- Enterprise Automation

#### 3. Delivering Measurable Impact & ROI

All models are focused on precision and efficiency to optimize investment returns.

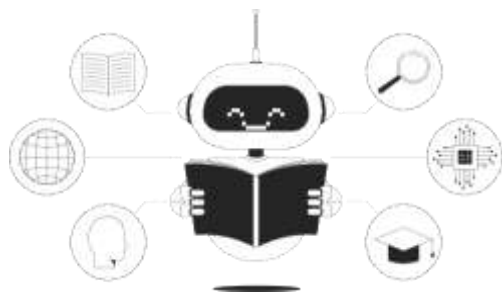
#### 4. Strategic Foundation

##### Pioneering National AI Leadership

Among the first to design and deploy integrated AI systems using local Jordanian expertise.

#### 5. Built on Trust & Compliance

Engineered to meet national data laws and international AI governance standards.



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### 2.6 References

#	Project / Client	Solution Type	Scope & Impact	Role & Contribution
1	Smart Class Platform (Web & Mobile App)	EdTech / SaaS	Developed a dual-platform educational management system . Features real-time attendance, digital content delivery, and interactive tools for schools in UAE & Jordan. <sup>1</sup>	<b>Software Development Lead</b> Led the technical architecture and development lifecycle, coordinating with the mobile and backend teams to ensure seamless data synchronization.
2	SiTest & Psy-master (Integrated Platform)	AI Assessment & E-Learning	Built a robust psychometric testing and personalized training engine . The system uses data-driven insights to evaluate candidate traits for HR and educational institutions. <sup>2</sup>	<b>Software Development Lead</b> Oversaw the core logic implementation for assessment algorithms and managed the integration between the testing engine (SiTest) and the training module (Psymaster).
3	Seagull AI Solutions (SAIS)	AI Corporate Portal	A sophisticated web platform highlighting AI capabilities in automation and sustainable development .Positioned the client as a leader in AI innovation in the MENA region. <sup>3</sup>	<b>Software Development Lead</b> Developer Collaborated with UI/UX designers to implement complex service visualizations and high-performance frontend architecture.
4	SmartTrack Institute (smartTrack)	LMS & Training Portal	An AI-powered educational portal with an integrated Learning Management System (LMS) for onsite and online training in Abu Dhabi. <sup>4</sup>	<b>Software Development Lead</b>
5	Medical Training "Docrazi"	Marketplace / Specialized Platform	A specialized marketplace for medical electives and recruitment . Features a simplified application process and secure booking system for global clinical experiences. <sup>5</sup>	<b>Software Development Lead</b> Developed the secure booking engine and marketplace features, ensuring strict data privacy standards for medical professionals.
6	MetaFox Company (Metafox)	Corporate Digital Identity	A high-performance corporate website for a leading UAE IT provider .Showcases CCTV, ERP, and networking solutions with a lead-generation focus. <sup>6</sup>	<b>Software Development Lead</b> Built a responsive, SEO-optimized interface to establish a strong digital presence and drive business leads.