

MOHAMED MEABED

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Engineering leader with 15+ years of progressive leadership and hands-on experience in building and scaling high-performance engineering organizations. Expertise in building AI products with Gen AI, Large Language Models (LLMs), Retrieval-Augmented Generation (RAG), and Computer Vision solutions integrated into cloud-native, microservices-based platforms. Proven track record of recruiting and leading 150+ engineers across distributed teams, architecting scalable Cloud Native AI Software - delivering 70% cost reductions, 50%+ deployment velocity improvements, and platforms supporting \$500M+ revenue and millions of transactions..

PROFESSIONAL EXPERIENCE

CTO – [XpertSea](#) – Toronto, Canada

April 2022 – Current

XpertSea builds technologies that modernize the aquaculture shrimp industry, building a suite of mobile and cloud and AI products using computer vision, deep learning, machine learning and artificial intelligence to transform and digitize farm operations, and day to day activities, weight and count estimation, forecasting growth and changes for the harvest, optimizing production and costs to reach maximum profitability in the farm.

Key Achievements:

- Scaled and led a high-performing, distributed engineering organization of 15+ specialists across AI/ML, backend, frontend/mobile, and hardware domains in Canada and Ecuador, fostering agile processes and innovation culture.
- Led the overhaul of XpertSea's platform, transitioning from self-hosted AI computers to cloud-based GPU training on Google Cloud Platform (GCP), cutting training and processing time from months to days.
- Refactored legacy backend, frontend, mobile apps, and hardware, improving OpenCV for computer vision and enhancing data collection and annotation processes.
- Spearheaded migration to a Kubernetes-based architecture with GraphQL, enabling a scalable, offline-capable mobile app with real-time AI and computer vision capabilities.
- Built and adopted CI/CD pipelines for backend, frontend, mobile, and AI training/inference, reducing deployment times from hours to minutes and enhancing system reliability.
- Drove migration of infrastructure from AWS to GCP, reducing costs by an estimated 70% and improving availability of AI and machine learning tools.
- Built production AI systems including computer vision, generative AI (tool-calling, MCPs, RAG, OCR), autonomous agents, and ML pipelines.
- Led the team building internal tooling, including Admin Panel (backoffice) systems and data annotation platforms, streamlining operations and boosting team productivity.
- Oversaw the strategic management of Scientific Research and Experimental Development (SR&ED) tax credits and the patent portfolio, securing funding for innovation and protecting intellectual property through successful patent filings.
- Fostered a data-centric culture using tools like Metabase, Mixpanel, Google Analytics, Firebase, Crashlytics, Bugsnag, and Google Cloud Logs, aligning teams with data-driven goals and improving decision-making.

Loblaw is the largest retailer in Canada serving 20m+ customers across the country with 40+ consumer brands and 2000+ retail stores. In my role I lead leading Software Engineering for Marketplace and Apparel brand JoeFresh at Loblaw Digital

Key Achievements:

- Leading a multiple teams of software engineers and other technical staff members who are responsible for designing and implementing new technologies
 - Developing, communicating, and enforcing company policies regarding the development process
 - Collaborating with stakeholders to identify business needs and define project objectives
 - Estimating time and cost requirements for projects and monitoring progress to ensure goals are met
 - Evaluating new technologies and recommending their adoption for use in future projects
 - Reviewing proposals from vendors to purchase new software or services, and negotiating terms of the agreements
 - Ensuring that projects are completed on time and within budget guidelines
 - Conducting post-mortems to determine why projects failed and how they can be improved in the future
 - Developing, documenting, and enforcing processes for handling changes to software that are created by outside sources, such as customers or vendors
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Tradeling is the B2B eMarketplace and e-commerce platform to empower business buyers and simplify trade in the MENA Region

Key Achievements:

- Building and scaling the engineering team from to 45 FTE in our 1st year.
 - Architecting and Building the B2B e-commerce marketplace platform with the latest technologies to launch our MVP in 6 months.
 - Established compliance with the Payment Card Industry (PCI) Data Security Standards.
 - Leveraged agile software development methodologies throughout the product life cycle with the development team.
 - Building scalable tech stack platform using latest technologies, such as AWS Cloud, Kubernetes, Docker, MongoDB, Elasticsearch, MySQL, BigQuery, MetaBase, Node.JS, Typescript, React, NextJS, ReactNative, Detox, Terraform, Ansible, Jenkins, Github, CI/CD, Jira, Cypress.
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[Almosafer](#) & [Tajawal](#) are the leading Online Travel Agency brands in the MENA region and part of Seera Group

Key Achievements:

- Building the technology organization by establishing 3 different office locations “Dubai / Cairo / Berlin” and recruiting 150 Software Engineers
- 50+ microservices that used externally and internally with revenue growth of over \$500 million, 3+ million transactions

- 4 mobile native apps, 2 brands and launching 10 markets in MENA
- Mobile web front-end with technology PWA “ Progressive web apps, offline browsing and browser caching, etc. “
- Fully Integrated Back office application, CRM and customer 360 system used daily by 600+ staff users
- Multiple Financial applications that automate all finance activities like supplier payments, reconciliation, reporting and external system integration like SAP, Quickbooks, Oddo
- Multilingual CMS system as API that power and generate over 10 million pages and 3 million daily views and used for SEO, 10000+ SEM Ads campaigns, landing pages, web and mobile marketing
- Payment API service with 20+ payment options with millisecond response for million transaction scale
- Building and continuously improving software development and continuous deployment processes with immediate releases
- Building devops culture with CI, CD, 95% ops automation, 80% software test coverage, monitoring and 24/7 software support models
- Implementing agile product development methodology in all teams “CMS, QA, IOS, Android, Backoffice, Flight, Packages, Hotel, Insurance, Integration, BI, Architecture, Devops, ... “
- Operating multiple workload of 350+ servers in AWS Cloud with 100% orchestrated dockerized environment
- Building multiple security layers, and security team to enforce security best practices in development and processes with regular penetration testing, PCI-DSS compliance, activity logs, malicious activity monitoring and alerts
- Building high-performance integrations with 50+ supplier through complex XML / SOAP / JSON API's
- Building conversion rate optimization process and A/B testing enabled by feature flags and configuration management that power 100+ experiments at anytime in the websites
- Build data-driven culture from ideas to decision making
- In-house Big Data stack enabling processing 100+ data sources, producing 400+ visual dashboards used daily by 700+ users, processing terabytes of all kind of data, website data, mobile data, social data, marketing data “ads, campaign, spend“, financial data, customer service and operations data
- Deliver numerous training modules and presentations by collaborating with top engineers from key clients including Google, Facebook, Twitter, Amadeus, Sabre, Travelport, AWS, Microsoft

Key Duties:

- Determine strategic direction of product development and uphold the company's position at the forefront of technology by focusing on tech, product content and user design
- Responsible for the product roadmap and for the software development and technology strategy. development of cloud solutions processing millions of transactions for the travel and hospitality industry
- Organizational leadership with responsibility for business strategies and driving activities to meet corporate objectives
- Manage corporate enterprise architecture across the group
- Developing Org Structure, Performance management structure and incorporating it in Corporate HR “ SAP - SuccessFactors”
- Maintain relationships with key partners, customers and vendors
- Management of operating and capital budgets

Software Engineer **Westwing Home & Living** – Munich, Germany Dec 2013 – Feb 2015

- Developing e-commerce B2C Platform to sell home & decor furniture online with over \$400 million revenue
 - Developing customer 360 and CRM systems with base over 6 million customers
 - Developing multi-warehouse inventory supply chain management systems in used by 1000+ staff users in 15 warehouses in 10 countries
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Software Engineer – **Desado L.L.C.** – Dubai, UAE Nov 2012 – Nov 2013

- Developing e-commerce B2C Platform to sell home & decor furniture online
 - Developing OpenERP Logistics, Inventory and Finance integration
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Software Engineer – **Mumzworld.com** – Dubai, UAE Dec 2011 – Nov 2012

- Developing e-commerce B2B and B2C Magento Platform to sell child, mother and baby products with over \$10 million revenue
 - Building BI / DWH OLAP / Pentaho / Tableau that serve 40+ visual dashboards, reports and adhoc queries
 - Developing OpenERP Logistics, Inventory and Finance integration
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Senior Web Developer – **Tahadi Games Media** – Dubai, UAE Feb 2011 – Dec 2011

Developing large scale online gaming hub service over 2 million players in MENA for Online Games

Senior Web Developer – **Sangole** – Cairo, Egypt Feb 2010 – Jan 2011

Developing e-commerce B2B and B2C Magento Platform to sell global watch brands online

Software Developer – **Money Expert Group** – Cairo, Egypt Jan 2009 – Jan 2010

- Building online portal for realtime forex and financial data aggregation
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Software Developer – **HP Post House** – Cairo, Egypt Jan 2008 – Dec 2008

- Building Internal systems that allow real time image processing and video editing in live satellite streaming
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LANGUAGES

Arabic - Native

English - bilingual proficiency

German - Elementary proficiency

CERTIFICATES

AWS Certified Solutions Architect - Professional

AWS Certified Solutions Architect - Associate

PRINCE2 Foundation

Magento Certified Solution Specialist

Magento Certified Front End Developer

Magento Certified Developer Plus

Zend PHP 5.3 Certified Engineer

EDUCATION

BSc, Computer Science, Faculty of Computers and Information - Cairo University, 2003 - 2010

TECHNICAL SKILLS

Artificial Intelligence

Generative AI, Large Language Models (LLMs), Prompt Engineering, Retrieval-Augmented Generation (RAG), LLM Fine-Tuning, Tool-Calling & Function Calling, AI Agents & Autonomous Systems, LLM APIs (OpenAI, Anthropic), Hugging Face, LangChain, Vector Embeddings & Databases, Model Evaluation, AI Model Integration, OCR & Multimodal AI

Machine Learning & Computer Vision

Computer Vision, Deep Learning, Machine Learning Pipelines, OpenCV, Object Detection & Segmentation, Data Annotation & Labeling, Model Training & Inference, Supervised/Unsupervised Learning, MLOps, ML Deployment & Monitoring

Software Architecture and Design

Microservices Architecture, Cloud-Native Design, Event-Driven Architecture, API Design (REST, GraphQL, gRPC), WebSockets, Asynchronous Programming, Distributed Systems, Scalable Systems

Infrastructure and Devops

Google Cloud Platform (GCP), Amazon Web Services (AWS), Microsoft Azure, Kubernetes, Docker, Terraform, Ansible, Jenkins, GitHub Actions, CI/CD Pipelines, Prometheus Monitoring, ELK Stack, Nginx, HAProxy, Infrastructure as Code

Big data and Analytics

Spark, Kafka, Elasticsearch, Cassandra, Hadoop, BigQuery, PrestoDB, Data Pipelines, ETL Processes, Tableau, Metabase, Mixpanel, Google Analytics

Programming and Frameworks

Javascript - Nodejs, Typescript, PHP, Golang, React, React Native
Express, Angular, React, React-Native, Laravel, Lumen, Slim, Symfony

QA and Testing Automation

Testrail, TestLink, Appium, Selenium, Behat, Unit test, Integration test, API test, Load test

Databases and Queues

MySQL, PostgreSQL, MS SQL, Elasticsearch, Solr, HBase, MongoDB, Cassandra, Redis, RabbitMQ, Kafka, NSQ

Tools and IDE

Git, IntelliJ IDEA, VSCode, Sublime, Vim, Zsh, iTerm

Office and Productivity Applications

MS Excel, MS Visio, MS Word, PowerPoint, Google Apps, Jira, Confluence, Youtrack, Slack, Notion