

ALI TRABOULSI

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Summary

Software Engineer with 2+ years of experience developing scalable software components, building and maintaining RESTful APIs, and optimizing performance in distributed systems. Collaborated on research and development of advanced machine learning algorithms, focusing on efficiency and optimization

Technical Skills

- **Backend:** Node.js, Nest.js, Express.js, FastAPI, Laravel,, RabbitMQ
- **Databases:** MongoDB, PostgreSQL, SQL
- **Languages:** Python, JavaScript, TypeScript, SQL, HTML/CSS, PHP, Java
- **Machine Learning:** TensorFlow, Computer Vision, openCV, Scikit-Learn, Pandas, NumPy, CNNs, RNNs
- **Frontend:** React.js, Redux, Next.js, Tailwind CSS
- **DevOps & Tools:** Git, Docker, AWS, Jenkins, Cypress, JIRA, CI/CD pipelines
- **Tools & Frameworks:** GraphQL, Apollo, RabbitMQ, Git, JIRA, WebSockets, Stripe
- **Other Skills:** Microservices Architecture, Event-driven architecture, Testing (Jest)

Professional Experience

Machine Learning Engineer (Contractual)

Nov. 2024 – Present

The Scaling Ministry , Nugenesis, Dela ai

- Actively follow advancements in machine learning and face recognition, integrating new technologies into project workflows
- Documented research processes and findings, contributing to internal knowledge sharing and best practices
- Developed an AI agent capable of automating tasks based on Standard Operating Procedures (SOPs), leveraging natural language processing (NLP) and rule-based algorithms to ensure compliance and accuracy

Tech Quarters Lb

Oct. 2023 – June. 2023

Backend Developer

Beirut, Lebanon

- Developed modular, testable backend services using Nest.js, leveraging **Dependency Injection** and **Decorator-based syntax** for scalable and maintainable architecture
- Integrated third-party APIs and microservices into the Global Farms app using Nest.js's HttpModule, ensuring seamless communication between distributed services
- Implemented advanced caching strategies with **Redis** and **Nest.js CachingModule**, cutting response times and reducing database load by over 50%
- Managed PostgreSQL databases with **Prisma** ORM, utilizing Prisma Extensions and raw **SQL queries** for efficient data handling
- Created **custom decorators** for Role-Based Access Control (RBAC) in **Nest.js**, enhancing security by implementing fine-grained permissions for various user roles
- Built a custom query builder for Prisma to facilitate filtering data through multiple arguments passed in the request URL or query parameters

Zaka Institute

Aug. 2023 – Dec. 2023

Machine Learning Trainee

Beirut, Lebanon

- Developed backend components for ML workflows, integrating Python-based APIs to support TensorFlow models.

- Worked with large datasets to train and evaluate machine learning models, including face recognition systems.
- Developed and optimized face matching algorithms as part of computer vision projects
- Built and assessed case-study models, optimizing performance using Python libraries (NumPy, Pandas)
- Architected diverse models including computer vision (OpenCV), natural language processing (NLTK), and time series
- Ranked **3rd** out of **35** participants on the project leaderboard, demonstrating rapid growth in AI skills

Codi Tech

Full Stack Web Developer

Oct. 2020 – Apr. 2021

Beirut, Lebanon

- Developed backend logic and database schema using Node.js and Express.js, architecting RESTful web services within the MERN stack to ensure efficient data management and server-side processing
- Created secure REST APIs for user authentication and authorization utilizing JSON Web Tokens (JWT), implementing best practices to ensure a secure data flow and protect sensitive user information
- Integrated WebSocket APIs within the Express.js framework to enable real-time communication between clients and backend services, enhancing the responsiveness and interactivity of applications
- Collaborated in designing a scalable backend infrastructure using Node.js, optimizing database queries and data retrieval operations to improve performance and reduce latency by implementing indexing and efficient query strategies
- Employed middleware in Express.js to handle error management, logging, and request validation, ensuring robust and maintainable code
- Utilized Mongoose for MongoDB interactions, defining schemas and models that enforce data integrity and validation at the database level

Projects

[Global Farms Website](#) | *Nest.js, Redis, PostgreSQL, WebSockets*

- Developed marketing APIs, integrated Redis caching for real-time updates, and implemented scalable microservices for product management
- Implemented Redis caching for real-time notifications using WebSockets
- Created custom PostgreSQL database triggers for updating product-related counters

Bitcoin Optimized Prediction Model | *Python, LSTM, CI/CD*

- Implemented an LSTM-based machine learning model for Bitcoin price prediction, achieving 85% accuracy
- Developed and integrated a custom CI/CD pipeline to automate model training and deployment

PresentMe (Event-Streaming Website) | *Laravel, React, Mongoddb*

- Developed and implemented a multi-authentication system for administrators, organizers, and participants, ensuring secure access to backend resources and user data using Laravel
- Designed and constructed a robust backend infrastructure using Node.js and Express.js, enabling seamless integration of event management features
- Employed state management techniques to optimize the website's performance and responsiveness, enhancing the user experience across various devices

Certificates

Artificial Intelligence Certificate

Zaka Institute, Beirut, Lebanon

- Expected to completed 100+ hours of training covering machine learning models selection and training
 - Trained more than 6 models from scratch involving regression, classification and deep learning algorithms
- Implementations:** Naive Bayes Algorithm, Multi-Linear Regression, Convolution Neural Networks

Fundamentals of Project Management

SMART Skills Group

- Completed 20+ hours of training
- Gained expertise in project planning, execution, and oversight to enhance business operations and improve efficiency

Online Soft Skills Certificate

The Nawaya Network (In collaboration with UNICEF)

- Enhanced communication, teamwork, and leadership skills
- Nominated second place out of 80 participants

Education

Lebanese International University

Oct. 2018 – Jun. 2020

Master of Science in Mechanical Engineering

Beirut, Lebanon

- Concentrated on analytical thinking and problem-solving techniques
- Graduated with a GPA of 3.87/4
- Marked an outstanding performance in Java Programming courses including OOP

Lebanese International University

Oct. 2014 – Jun. 2018

Bachelor of Science in Mechanical Engineering

Beirut, Lebanon

- Concentrated on analytical thinking, project management, and numerical analysis
- Placed in Dean's honor list in Mar. 2016 and July. 2017

Languages

- **Arabic** (Native), **English** (Full Professional Proficiency), **French** (Full Professional Proficiency)