

Saber BEN REJEB

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CURRICULUM VITAE

Profile

Holder of Information Systems and Software Engineering degree from the Excellence University of Tunis (Sup'com) and a Master's Degree in Engineering Project Management from the École de Technologie Supérieure (ETS) - Montréal QC, I bring over 14 years of international experience in information systems and software development. As a **specialist in artificial intelligence applied to marketing**, I can **help you increase your sales and optimize your processes** through innovative AI-driven strategies.

My expertise spans **full-stack software development, AI/ML integration, cloud computing, and ICT project management**. I excel in transforming complex business challenges into scalable, efficient, and high-performance technology solutions.

Managerial skills

- Good project and team management abilities.
- Organizational and planning skills.
- Flexibility to changes & collaboration and problem-solving skills.
- Analytical mindset and methodological approach.

Architecture & Design skills

- Excellent knowledge of the software development lifecycle.
- Expertise in information systems development.
- Mastery of software and systems quality assurance.
- Excellent design skills (UML, Merise) and Object-Oriented Programming.

Software Development Technologies

- **Database:** SQL Server, Oracle, MySQL, PostgreSQL, MongoDB, DynamoDB.
- **Backend:** Node.js/Express.js/Nestjs, GoLang, JAVA Spring Boot, MS.Net/C#.
- **Frontend:** ReactJS / ReactNative, TypeScript / JavaScript, Redux, GraphQL, REST APIs, Web Services, HTML5, CSS3, AJAX, Cordova for Hybrid Applications, etc ...
- **Cloud Services:** AWS (ECS, EC2, S3, Amplify, IAM, Lambda, Cognito, AppSync, DynamoDB), Google Cloud Platform (GCP), DigitalOcean.
- **DevOps CI/CD:** Git(Github, Bitbucket, Gitlab), Jenkins, Docker, Kubernetes, Terraform.
- **AI/ML Technologies:** Python (TensorFlow, PyTorch, Scikit-learn), Natural Language Processing (NLP), Computer Vision, LLMs, Fine-Tuning, Data Analytics, and Deep Learning frameworks.

University Education

Master 2 (M2), Engineering Project Management Université du Québec - École de Technologie Supérieure ÉTS - Montréal QC	2012-2014
Engineer's degree, Information Systems and Software Engineering École Supérieure des Communications de Tunis SUP'COM - Tunisie	2008-2011
Licence, Mathematics and Computer Science Institut Préparatoire aux Études d'Ingénieurs de Tunis IPEIT - Tunisie	2006-2008

Professional Experiences

#12 **HEYVEL TECHNOLOGIES INC.** | Quebec - Canada **December 2020 - Today**
Senior Software Development Consultant **4 years 6 months**
Full-Stack | Node.js, NestJS, GoLang, ReactJS, DevOPS CI/CD

- Architected and delivered end-to-end full-stack solutions (ReactJS, Node.js, NestJS, Python, GoLang) across diverse sectors—ERP/CRM, EdTech, e-commerce, public safety, healthcare, fintech and supply chain—for clients in **North America, Europe, the Middle East and Asia.**
- Designed and maintained scalable REST and GraphQL APIs, real-time WebSocket services and microservice architectures, ensuring high performance and modularity.
- Built and optimized DevOps pipelines with Docker, Kubernetes, Terraform and GitHub Actions (plus Jenkins), orchestrating reliable CI/CD deployments on AWS, Azure and hybrid environments.
- Integrated AI/ML capabilities—fine-tuned LLMs, Hugging Face Transformers, TensorFlow, Whisper, custom safety-scoring models—to power chatbots, analytics dashboards, safety indexing and intelligent content delivery.

Environment: Node.js/Express.js/NestJS, GraphQL/REST API, ReactJS/React Native, TypeScript, GoLang, Java Spring Boot, Linux, DevOps (Git, Terraform, Jenkins, Docker, Kubernetes), AWS (ECS, VPC, EC2, S3, Amplify, IAM, Lambda, Cognito, AppSync, DynamoDB), AI/ML frameworks (Python, TensorFlow, PyTorch), etc.

PROJECT-5 # TINYTALKS AI - 123 Publishing House (UAE)

- Full-stack implementation with a ReactJS frontend and Node.js (Express) backend delivering an interactive learning experience.
- Design and fine-tuning of conversational AI agents using Hugging Face Transformers, trained on the company's entertainment characters, stories, voices and world lore.
- Real-time chat interfaces over WebSockets (Socket.IO) supporting both voice- and text-based interactions.
- Admin CMS for managing characters, story scripts, dialogue trees and voice assets.

- Integration of speech-to-text (Whisper) and text-to-speech (Amazon Polly) pipelines with kid-friendly voice presets.
- User onboarding, profile management and age-based content segmentation (3-5, 6-8, 9-10).
- Gamification layer: progress tracking, interactive quizzes, badges and rewards.
- Metrics and analytics: engagement tracking, learning outcome reports, and system performance dashboards.
- Containerized microservices with CI/CD pipelines for zero-downtime deployments.

Environment: Node.js/Express.js, REST API/WebSockets, ReactJS, TypeScript, PostgreSQL, Redis, Linux, DevOps (Git, Docker, Kubernetes, Terraform, GitHub Actions), AWS (ECS, RDS, S3, Lambda), AI/ML frameworks (Hugging Face Transformers, TensorFlow), STT/TTS (Whisper, Amazon Polly)

PROJECT-4 # BIZPROSOFT - NEXTTRADEX TECHNOLOGIES (UAE)

- Development of a web ERP/CRM platform integrating a modern ReactJS frontend and a scalable Python (FastAPI) backend to deliver a smooth, high-performance user experience.
- Implementation of a flexible GraphQL API with FastAPI and Ariadne, enabling efficient, type-safe access to all business data and operations.
- Integration of Auth0 for authentication and authorization, managing multi-tenant roles and permissions so users can switch between companies seamlessly.
- Creation of modular business services—accounting, invoicing, CRM, inventory management and HR—each implemented as a Python microservice with clear separation of concerns.
- Enrichment of the ReactJS UI with Tiptap for rich-text configuration (notes, contracts) and a dynamic data grid (e.g. Material-UI) for efficient table-driven workflows.
- Development of interactive dashboards and KPI visualizations using Nivo, delivering real-time insights into financial metrics, sales performance and operational health.
- Enforcement of code quality and testing standards via flake8, black and isort for Python, ESLint and Prettier for React, plus pytest for backend and Jest/Vitest for frontend—managed in a TurboRepo monorepo.
- Containerization and infrastructure automation with Docker and Terraform, tied into CI/CD pipelines (GitHub Actions) for reproducible, scalable deployments in production.

Environment: Python (FastAPI), GraphQL (Ariadne)/REST API, ReactJS (TypeScript), PostgreSQL, Linux, DevOps (Git, Docker, Docker Compose, Terraform, GitHub Actions), Auth0, Monorepo management (TurboRepo).

PROJECT-3 # AGENTIC AI - AI University Coach (USA)

- Development of a fine-tuned AI serving as an academic coach for a private university.
- Collection, cleaning, and structuring of educational and administrative documents.

- Preparation of an instruction dataset for supervised training.
- Fine-tuning of an open-source LLM according to NLP best practices.
- Implementation of evaluation metrics (fidelity, accuracy, hallucination).
- Drafting of comprehensive documentation to ensure reproducibility.
- Deployment of the model as a lightweight API ready for integration.
- First phase tested using university documents, covering FAQs, regulations, and curricula.

Environment: Python, FastAPI, Hugging Face Transformers, DeepSeek, LLaMA, LoRA, Weights & Biases, PyTorch, Docker.

PROJECT-2 # PAREN EV (USA/Canada)

- Development of an R&D system for hourly safety scoring of EV charging stations in the United States.
- Design of an hourly Safety Score algorithm based on crime, weather, and lighting data.
- Integration of the Spotcrime API for analysis of geolocated incidents around the stations.
- Connection to the OpenWeatherMap API to include weather conditions influencing perceived safety.
- Use of Sentinel Hub and Google APIs to assess ambient lighting (day/night).
- Structuring of a geospatial database and an automated calculation pipeline.
- Monthly score updates, with real-time refresh for certain factors.
- Preparation for integration into Paren EV products to recommend the safest stations.

Environment: Node.js/NestJS, Python (FastAPI), GoLang, PostgreSQL, Spotcrime API, OpenWeatherMap API, Sentinel Hub, Google APIs, AWS, Git.

PROJECT-1 # A2C-ICR (Canada)

- Development of a web platform integrating a modern frontend (React) and a scalable backend (NestJS) to deliver a smooth and high-performance user experience.
- Implementation of a scalable GraphQL API using NestJS and Apollo Server, enabling flexible and efficient data access.
- Integration of authentication and authorization mechanisms via Auth0, ensuring secure management of users and resources.
- Implementation of a rich text editor with Tiptap, offering users advanced content creation and management features.
- Use of Nivo for data visualization, allowing complex information to be presented as interactive charts.
- Continuous performance and code-quality improvements using linting tools (Biome), testing frameworks (Jest, Vitest), and monorepo management (TurboRepo).
- Infrastructure and deployment management via Docker and Terraform, with potential integration into Cloud solutions, ensuring reliable and scalable production releases.

- Implementation of an ORM (Sequelize) to streamline operations on a MySQL database, ensuring a fast and scalable persistence layer.

Environment: TypeScript, NodeJS, NestJS, React, GraphQL (Apollo), Auth0, Tiptap, MUI, Nivo, Vite, Vitest, Jest, Docker, Terraform, MySQL, Sequelize, TurboRepo, Biome, Git, CI/CD.

#11 **KEHOPS - KUMOJIN SOLUTIONS INC.** | Quebec - Canada **July 2023 - April 2024**
Senior Software Development Consultant 10 months
Full-Stack | Node.js, NestJS, GoLang, ReactJS

- Developed a web SPA allowing users from different organizations to exchange information confidentially.
- Integrated Auth0 for authentication and user rights management.
- Developed Web Services / GraphQL API Backend (Node.js, Nestjs) to handle frontend application requests.
- Managed data repositories for CRUD operations.
- Created and maintained unit tests for use cases and data repositories.
- Integrated Stripe for user payment registration.
- Supported development of components, views, routes, and pages in the frontend application (React, TypeScript, DaisyUI, and Tailwind).
- Incorporated AI/ML techniques to enhance data processing and user personalization.

Environment: TypeScript, Node.js, NestJS, GoLang, GraphQL, Stripe, Auth0, MySQL, Docker, Azure, React, Tailwind, CSS, DaisyUI, AI/ML tools and methodologies.

#10 PAREN - KUMOJIN SOLUTIONS INC. | California - USA **March 2023 - June 2023**
Senior Software Development Consultant **4 month**
Full-Stack | Node.js, NestJS, ReactJS, GoLang, DevOPS CI/CD

- Designed and developed a platform with a financial KPI dashboard for startup CEOs.
- Built and maintained a robust backend using Node.js and NestJS for business logic, database interactions, and external services.
- Developed user-friendly UIs for the KPI dashboard using React.js and TypeScript.
- Used TypeORM for data modeling and management, ensuring data integrity and performance.
- Integrated Plaid API to securely access financial information and incorporate it into the dashboard.
- Implemented DevOps practices to enhance development and deployment efficiency using tools like Git, GitHub Actions, Docker, and Terraform.
- Managed cloud services on Microsoft Azure to ensure a secure, scalable, and high-performance cloud infrastructure.
- Leveraged AI/ML-driven analytics to enhance financial insights and predictive performance.

Environment: TypeScript, Node.js, NestJS, GoLang, GraphQL, TypeORM, MongoDB, React, Material UI, DevOps (Git, GitHub Actions, Docker), Azure, Plaid Financial Services, Slack Chatbot, AI/ML frameworks for data analytics.

#9 **COTERIE - CODEBOXX INC.** | Boston - USA **September 2022 - February 2023**
Senior Software Development Consultant 6 month
Full-Stack | Node.js, NestJS, GoLang, ReactJS, DevOPS CI/CD

- Developed an e-commerce website with U.S.-based clients.
- Constructed and maintained a robust backend using Node.js for business logic, database interactions, and API integrations.
- Developed and optimized dynamic user interfaces for the e-commerce site using React.js.
- Configured the site on Shopify to meet specific management needs for products, orders, and user experience.
- Used Klaviyo to develop targeted email marketing campaigns, client segmentation, and communication automation to enhance customer engagement.
- Used Prismic as a content management system to facilitate the updating and management of dynamic content on the website.
- Integrated Twilio to manage direct communications with customers, such as SMS notifications or automated calls for customer support.
- Applied SEO best practices to enhance site visibility in search engines, focusing on technical aspects and content.
- Integrated AI/ML solutions to optimize user behavior analytics and marketing strategies.

Environment: TypeScript, NodeJS, NextJS, Sanity, Vercel, GoLang, REST API, PostgreSQL, DevOps (Git, GitHub Actions, Docker, Terraform) AWS (VPC, ECS, IAM, EC2, S3), Stripe, Auth0, Shopify, Twilio, AI/ML integration tools.

#8 **EBAY CANADA - CODEBOXX INC.** | Quebec - Canada **March 2022 - August 2022**
Senior Software Development Consultant 6 months
Full-Stack | Node.js, ReactJS

- Designed and developed a new inventory management system for eBay.
- Integrated 2FA authentication via Google Authenticator to manage user access rights on the eBay platform.
- Used Ruby on Rails to create a robust and secure backend.
- Set up and integrated GraphQL APIs between frontend and backend applications.
- Developed data models (PostgreSQL): managed CRUD operations for inventories.
- Optimized queries to improve system performance and reliability.
- Developed unit and integration tests to ensure the quality and reliability of system components.
- Developed components, views, routes, and pages for the frontend application using React.js, with a focus on UX/UI tailored to eBay's needs.
- Introduced AI/ML methodologies to predict inventory needs and optimize stock management.

Environment: TypeScript, NodeJS, Ruby on Rails, GraphQL, Firebase, MFA Auth, PostgreSQL, Docker, Google Cloud Platform, React, Material UI, AI/ML predictive analytics tools.

#7

LOGMEIN - GOTO INC. | Quebec - Canada

December 2020 - February 2022

Senior Software Development Consultant

1 year 3 months

Full-Stack | Kafka, Java, Node.js, ReactJS, GoLang

- Designed and implemented real-time dashboard applications for telecommunications (CCaaS) using ReactGridLayout, enhancing interactivity and performance for end users.
- Integrated webchat and developed customized chat assistants with Reactflow, increasing communication efficiency with customers.
- Developed and supported event-driven queuing systems, including the implementation of a queue callback feature that optimizes customer interaction management.
- Restructured the company's Kafka topology by segmenting topics and using Kafka streams with Protobuf, thereby reducing message size by 60%.
- Designed and developed backend functionality using queue callers for targeted marketing campaigns, thereby improving customer engagement.
- Developed Java applications for stream processing and data consumption through Kafka, integrating these data into Redis and delivering them to clients via WebSocket in real time.
- Established and implemented a queuing system for contact centers on Kafka and Java, defining and implementing metrics and service level agreements (SLAs) to assess system performance and reliability.
- Added AI/ML components to analyze real-time data for improved decision-making and customer engagement.

Environment: TypeScript, Node.js, ReactJS, Kafka, Java, , GoLang, Redis, WebSocket, Protobuf, Redux, RESTful APIs, Scrum/Kanban (Jira), Mixpanel, AI/ML-based data processing techniques.

#6

KOMUTEL INC. | Quebec - Canada

August 2014 - November 2020

6 years 3 months

Telecommunications Project Manager

- Project management in Agile Scrum mode.
- Using the JIRA tool in project tracking.
- Conduct a team of Programmers-Analysts.
- Collection and analysis of the needs of large portfolio clients.
- Planning of development processes for each of the dependent in charge.
- Conduct modeling and design phases of software products.
- Control and technical monitoring of the progress of the projects.

Telecom Products Development

- Design and modeling of telecom solutions and software products.
- Development and programming of telecommunication software.
- Inspection of developed products and analysis of results.
- Troubleshooting and resolution of problems related to software developments.
- Configuration, installation, and commissioning of telecom products.
- Writing of development documents, architectures, and operations of telecom software.

Main developed products:

- **KONNECT:** A business-centric call center solution for call centers that provides instant messaging, audio/video call recording/recording, screen/document sharing, and inter-cloud communications.

Environment : NodeJS/ReactJS/Linux, Kurento/Asterisk, WebRTC/SIP, JQuery, Ajax, HTML5/CSS3, SQL Server 2012, Amazon EC2, integrated AI for call analytics.

- **DIAGNOSYS:** A diagnostic tool, allowing the inspection of client systems and the validation of the smooth running of certain parameters (Connectivity, Networks, Databases, and Communication with telephone systems) relative to all KOMUTEL products.

Environment: C#/WinForms, Hydra RemObjects Plugins System, Artificial Intelligence, SQL Server 2012.

- **DATA MANAGER:** A large-scale archiving and data management solution that cleans, archives or moves data or files across multiple storage types (Amazon EC2, Dropbox, Remote desktop, FTP, etc.), augmented with AI for data sorting and optimization.

Environment : NodeJS/ReactJS, Ajax, HTML5/CSS3, Archiving Systems (Amazon EC2, Dropbox, Remote Desktop, FTP, etc..)

#5

Focus & Focus International, SAP Labs France | Tunisia - France
Software Development Engineer

2012 - 2013
12 months

- Using the JIRA tool in project tracking.
- Participation in the various stages of product development SAP Solution Manager Edition 7.1, a platform that provides integrated support for the lifecycle of an enterprise solution.
- Collect and analyze the needs of potential customers for the product.
- Develop, in collaboration with product components managers, the software development processes to meet SAP customer specifications (ERP 'CRM, MM ...).
- Support SAP Solution Manager customers by solving their problems.

- Design and development of product software sub-components, and writing technical documents useful for test system agents.

Environment: MS-Project 2010, Microsoft Office (Advanced knowledge in Excel: Pivot Tables, formulas ...) Visio, SCRUM AGILE Methodology.

#4 SISGEO | Projet Gouvernemental Tunisien | Tunisia

September - December 2011

Information Systems Engineer

4 months

- GIS project coordination "Development of a spatial database of road signs (inventory, tracking, and reports)".
- Assist the project manager with project phase activities, project monitoring, and mastering (eg, integrated status, timelines, milestones, critical path, dependencies, change management, issues, risks, resourcing, meeting management, etc.).
- Participation in the development of project stages (eg: Conceptual spatial modeling of BD, collection, and processing of field data, solution integration, training, and end-user technical assistance).
- Control and mastering of the project keys (deadlines, resources, budget ...) on MS Project 2010.
- Drafting and management of tracking documents.

February - April 2011

Information Systems Engineer

3 months

- Participation in GIS project planning activities "Development of a spatial database of road signs (inventory, tracking, and reports)".
- Collection of customer needs and definition of business processes of the solution.
- Using the MS Visio tool for UML modeling of the spatial database of road signs.
- Document preparation and meeting management.

Environment: MS-Project 2010, Microsoft Office, PMI Processes and Methods (PMBOK), Geographic Information System (GIS), ArcView, ArcEditor, ArcInfo, MapInfo, GvSIG, ArcGIS Server, Geoserver, MapServer.

#3 OpenIT, Nokia Siemens Networks(NSN) | Tunisia

March - September 2011

Software Development Engineer

7 months

- Lead a Java / J2EE programming team.
- Development and implementation of an Intelligent-Network prototype in a Next Generation Network (NGN) framework, a platform for creating and managing value-added telecom services in all-IP networks.
- Definition and development of the prototype business processes.
- Planning, controlling, and monitoring tasks and development steps using the MS Project 2010 management tool.

- Leading the design, development, and implementation of telecommunication signaling protocols related to the product in accordance with industry standards.
- Test and validation of some call services (prepaid, toll-free number, ...).
- Documentation of work progress, project reports (performance, quality, status), and preparation of use cases useful for test plans.

Environment: MS-Project 2010, Microsoft Office, PMI Processes and Methods (PMBOK), SS7 Signaling System, Next Generation Networks (NGN), Long Term Evolution (LTE) Networks, Telephony and Voice over IP (VoIP).

#2 Orange Tunisia

Information Systems Engineer

June - September 2010

4 months

- Participation in the development process of a geolocation solution based on the architecture of the GPS system, with data feedback via GPRS support.
- Collect business needs and translate them into functional specifications.
- Implement tools and procedures for GPRS input data processing and real-time projection of geographic data.
- Document work progress, performance, and KPIs of deliverables.

Environment: MS-Project 2010, Microsoft Office, PMI Processes and Methods (PMBOK), GPRS Network, GPS Geolocation Technology, IP Data Transport Network, Geo-Server Map-Server, Java / J2EE Solution Development Platform.

#1 YEBNI Information & Communication | Tunisia

Software Development Engineer

June - August 2009

3 months

- Study and evaluation of SIP and RTP protocols for voice over IP services.
- Participation in the design and development of voice Emission / Reception models.
- Documentation of test plans for quality and performance measures.
- Participation in the integration of the model into an existing product of the company.

Environment: MS-Project 2007, Microsoft Office, Java / J2EE solution development platform, Telephony and voice over IP, Asterisk server, SIP and RTP protocols.