Islem Bargaoui

Full-Stack Developer

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Skills & Technologies

DevOps
Kubernetes | Docker | CI/CD | Infrastructure as Code (IAC) | Automation

Git
version control with github

Frontend Development
React | Next.js | Angular | Dart Flutter | performance | Stability | Scalability | Responsiveness | Clean Coding

Backend Development
Node Express | Nest.js | Spring Boot | Clean Architecture | Design Principles | RESTful | SQL | Security | Scalability

Cloud
AWS | Azure | Virtualization | Serverless Architecture Resource Management

System Design
Clean Architecture | Design Principles | Scalability | Microservices | Monolithic Architecture | High Availability | Load Balancing

SCRUM
Scrum ceremonies | Documentation | Scrum Artifacts|

Languages

Arabic	English	French
Native	Fluent	Intermediate

Education

Higher Institute of Information and Communication Technologies
Software Engineering and Computer Systems
Bechelor's Degree
Sep 2019 - Jun 2023

Tek-Up University
Software Engineering
Engineer's Degree
Sep 2023 - present

Profiles

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Summary

Versatile and forward-thinking Full-Stack Web Developer with a strong foundation in web development architecture. I am passionate about technology and have expanded into game and mobile development and graphic design. My quick adaptability and thirst for knowledge drive me to master new technologies swiftly. In the evolving IT field, I strive to lead innovation, exploring new frontiers and continually pushing the boundaries of the digital world.

Experience

CodeCooperation | Full time
Full-Stack Developer
Aug 2023 - Present

- Developed a scalable and user-friendly web applications using **Next.js** for the front end and **Nest.js** for the back end.
- As a full-stack Developer I improved performance and stability of web solutions using static site generation and **server-side rendering**
- I created a well-structured and maintainable code base using **Nest.js**'s features, such as **dependency injection** and **routing**.
- Designed scalable, **single-purpose** components applying fundamental software architecture principles and ensuring easy feature additions and system integrity.
- Enhanced the Github/Jira integration and deployment process through CI/CD and github actions
- Implemented **unit tests** and **integration tests** to ensure the quality of the code.

CodeCooperation | Internship
Full-Stack Developer
Feb 2023 - Aug 2023

- Created a well maintained, performant and responsive job portal platform TippJob using **NextJS** and **NestJS**.
- **Collaboration**: Worked closely with cross-functional teams to gather requirements and ensure seamless user experience.
- **Payment Integration**: Integrated STRIPE as a secure and efficient payment gateway.
- **Backend Development**: Developed a clean and maintainable codebase, implementing security best practices to ensure stability.
- **Knowledge Sharing**: Conducted weekly training sessions to educate colleagues on development tools like OpenCommit and OpenAPI.

More notable Work Experience

Freelance
Developer
2020 - Present
Tunis

- **PFE**: Developed multiple End-Of-Study projects for students using NextJS and Node Express.
- **Music Streaming**: Created a music streaming platform with Angular and Node Express.
- **Customer Support**: Built a ticket-based customer support platform using Angular and NestJS.
- **Internal Software**: Developed internal software for BELDEN's fiber optic management system, preparing, analyzing, and cleaning data using Python and Next.js.

MAE | Internship
Full-Stack Developer
June 2022 - Aug 2022
Tunis, Tunisia

- Developed a client interface for online contract creation and payment using NextJS and Node Express.

Projects

TippJob - Web App
Development

- During my tenure, I developed **TippJob**, an innovative job search platform renowned for its streamlined application process. I employed **NextJS** for the front-end, **NestJS** for the back-end (TypeScript), and utilized **MySQL** with **Prisma ORM** for database management. The codebase was written in **TypeScript** to ensure both reliability and scalability. Additionally, I integrated **Mailjet** for email functionality.
- A standout feature of TippJob is its one-click application process, significantly simplifying the user experience. Another notable feature is the **"blackboard"**, a time-sensitive job posting board that remains active for 48 hours, designed to meet the urgent hiring needs of businesses. I also implemented **Stripe** to handle all payment processing, including sessions, callbacks, and webhooks.
- This project exemplifies my ability to develop efficient, scalable, and user-friendly platforms.
- **Stack:** NextJS, NestJS, Prisma ORM, MaterialUI, Stripe, Mailjet, OpenAPI

Senioren Platz Finder - Web App
Development

- **Tech:** Within the SPF (Seniorenplatzfinder) project, I spearheaded the development efforts utilizing **NextJS** and **NestJS** frameworks (TypeScript), alongside cutting-edge technologies such as **Prisma ORM** for the SQL database management, **OpenAPI** for API documentation, and a combination of **Tailwind CSS** and **Material UI** for seamless user interface design.
- **White Label Solution:** One notable aspect of my contributions was the transition from TypeORM to Prisma ORM, a strategic decision aimed at enhancing performance and scalability. Additionally, I implemented a sophisticated **White Label Solution** feature, leveraging a single codebase and database architecture. Through meticulous schema design and attribute differentiation, this feature allowed users to brand the platform with their unique identity while ensuring data isolation and security. Material UI theming capabilities were harnessed to enable customizable color integration, empowering brand creators to tailor the platform to their visual identity.
- **CI/CD Pipelines:** Moreover, I engineered automated branch deployment and branch creation workflows integrated with **JIRA** ticket management, utilizing **CI/CD pipelines** powered by **GitHub Actions**. This streamlined development process ensured seamless testing and deployment of individual features separately, enhancing collaboration and efficiency within the development team.
- **Notable Features:** Furthermore, the chat functionality within the platform dynamically influences the filtering process based on conversations between care seekers and facilities. By analyzing message content and user interactions, the filtering algorithm adapts to evolving user preferences and requirements, enhancing the accuracy of search results and user experience.
- **Admin Panel:** Lastly, the implementation of a **State Machine** feature within the admin panel provided a clear visualization of relationship statuses between care seekers and facilities. This intuitive tool facilitated efficient management and monitoring of user interactions, optimizing administrative workflows and decision-making processes.

◦ Other Project Samples ◦

Sacha App - Digital Discount Voucher Platform

Development

PWA platform enabling restaurants to distribute discount vouchers to patrons.

NextJS, NestJS, Prisma ORM, MySQL, Docker, Digital ocean, S3

Cyber Maturity Assessment Tool - CMAT

Developed a web-based Cyber Maturity Assessment Tool (CMAT) utilizing NestJS for a scalable backend and NextJS for a performant frontend. Prisma ORM facilitates data persistence on a MySQL database.

- **Security Assessment:** Guides companies through an 80-question security evaluation to determine their cybersecurity maturity rating.
- **Financial Threat Impact:** Analyzes user-provided data to estimate potential financial losses from various cyber threats.
- **Dynamic Threat Intelligence:** Leverages NestJS and the **nest-crawler** package to crawl for up-to-date threat articles and relevant incident data (past 30 days).
- **User Dashboard:** Provides a centralized view for tracking past assessments and visualizing security posture improvement over time.

Tekdheb Online - Multiplayer Card Game (PWA)

Developed a feature-rich multiplayer PWA for the classic Tunisian card game "Tekdheb," utilizing **NestJS** for robust backend logic and **NextJS** with **NextUI** and **Framer-Motion** for a visually engaging user experience. Future features include user accounts, leaderboards, and AI-powered matchmaking.

PWA, NextJS, NestJS, Prisma ORM, Docker, framer-motion

BELDEN PPC software - Data Science

Software

- **Data Analysing and cleaning:** I developed a comprehensive software solution using **Python** to assist BELDEN in managing and testing their fiber optic infrastructure. This software employs data science techniques to analyze and clean large datasets, facilitating efficient filtering and interpretation of line test results. Leveraging Python's powerful Pandas library, the software processes various types of data, including light tests, preparation tests, and geographic tests, while also categorizing lines based on location, such as UK lines, USA lines, or RISER lines.
- **Challenges:** One of the key challenges I encountered was implementing robust data manipulation techniques, including concatenation and filtering functions, within the Pandas framework to ensure accurate and efficient data processing. Despite these challenges, the software successfully generates organized and structured data in the form of Excel files, providing BELDEN with actionable insights for effective line management.
- **Future automation feature:** I utilized **NextJS** to develop the frontend of the application, enabling BELDEN employees to seamlessly upload data generated by test machines. I'm currently working on implementing a new feature to automate the collection of data directly from the test machines, thereby eliminating the need for frontend interaction altogether. This innovative approach streamlines the data acquisition process, enhancing efficiency and reducing manual intervention.

Systems Experience

DevOps

TippJob

In managing the software design and DevOps aspects of the TippJob project.

- **DigitalOcean** was chosen as our cloud provider and DigitalOcean Spaces S3 for storing data ensuring our system could grow smoothly.
- With **Docker**, I packaged our application to make it easy to deploy and manage in different environments.
- **NGINX** helped us handle web traffic efficiently by balancing the load across our servers
- Using **GitHub Actions**, I automated our development process, making it faster and more reliable.
- We kept an eye on our system's performance with **New Relic.**
- **Uptime Kuma** was deployed and used to constantly check the health of the server for multiple projects allowing constant server monitoring.
- **Dozzle** was also integrated to monitor and log the running servers of our deployed frontend and backend.