AYMAN BOUABRA

Backend Developer

+212632505318 • bouabraayman@gmail.com • Casablanca, MA • LinkedIn • GitHub

Summary

Results-oriented backend developer with a strong foundation in Python, Node.js, and Docker. Skilled in crafting scalable web applications using Django, Express.js, and PostgreSQL, with expertise in RESTful API design, database management, and security best practices. Adaptable and collaborative team player with strong problem-solving abilities, eager to apply technical skills to contribute to innovative projects in a dynamic environment.

Projects

42 Transcendence

Created an immersive online multiplayer arcade gaming platform with advanced social features and robust monitoring capabilities.

- **Technologies Used**: Utilized **Django REST Framework**, **Web Sockets**, and **REST APIs** for seamless communication and user authentication via **JWT**.
- **Frontend Architecture**: Implemented a **Single-Page Application (SPA)** for a smooth and responsive user experience.
- **Containerization**: Leveraged **Docker** and **Kubernetes** to deploy a microservices architecture, ensuring efficient deployment, scalability, and high availability.
- **Monitoring and Insights**: Integrated **Prometheus** and **Grafana** for real-time monitoring and analytics, enhancing platform performance and user experience.

42 WebServ

Engineered a robust and efficient HTTP server from scratch, mirroring the architecture and functionality of NGINX.

- **Core Functionality**: Developed the server to handle various HTTP requests (GET, POST, DELETE) while processing static files, dynamic content, and HTTP redirects, fully compliant with HTTP 1.1 standards.
- **User Experience**: Implemented features such as file uploads, cookie management, and session tracking to enhance user interactions and state management.
- **Language Proficiency**: Utilized **C++98** for efficient memory management and performance optimization, ensuring a high-performance server solution.

42 Inception

Constructed a robust web development ecosystem using Docker to streamline service deployment and management.

- **Service Deployment**: Deployed essential services including NGINX, WordPress, and MariaDB within Docker containers, enhancing modularity and scalability.
- **Volume Management**: Established persistent volumes for the WordPress database and website files, facilitating efficient data handling and backup.
- **Enhanced Functionality**: Integrated Redis for caching, an FTP server for file transfers, and Adminer for database administration, improving overall system efficiency and user experience.

Insta Clone

Crafted a social media application replicating Instagram features using ReactJS for the frontend and Firebase for backend services.

- **User Interface**: Developed a responsive and interactive UI with ReactJS, ensuring a seamless user experience and efficient navigation.
- **Real-Time Database**: Leveraged Firebase for real-time data storage and user authentication, enabling instant updates and secure account management.
- **Multimedia Features**: Implemented photo and video upload functionality, along with likes, comments, and follower systems, to enhance user engagement and social interactions.

AI Digit Recognition

Developed an interactive web application that allows users to draw digits, leveraging AI to accurately recognize them.

- **User Interaction**: Designed an intuitive drawing interface for users to create digits, enhancing engagement and ease of use.
- **Machine Learning Integration**: Implemented a convolutional neural network (CNN) using PyTorch, trained on the MNIST dataset for high accuracy in digit recognition.
- **Backend Framework**: Utilized Django as the backend to manage user requests and serve model predictions, ensuring a robust and scalable architecture.

Skills

Programming Languages: C, C++, Python, JavaScript (Node.js)
Frameworks and Libraries: Django, Express.js
Databases: PostgreSQL, Firebase
Containerization and Orchestration: Docker, Docker Compose, Kubernetes
Misc: Git, Linux

Education

1337 Coding School   2022 – 2024
Computer Science Degree

Prince Moulay Abdellah   2018 – 2021
International Baccalaureate English Option

Languages

Arabic   English