Mohammed Belouarraq

SOFTWARE ENGINEER

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Software engineer with experience in full-stack development, DevOps and AI evaluation. Work spans Django, React, Docker, Kubernetes and CI/CD, alongside APEXLang skill maintenance and application evaluation at Oracle.

PROFESSIONAL EXPERIENCE

Oracle | **Research Assistant** Apr 2026 - Present

APEXLang Engineering & GenAI Evaluation | Casablanca, Morocco

- Benchmarked Codex/LLM-generated Oracle APEX applications across **7 reusable test fixtures**.
- Maintained the APEXLang skill and evaluated generated Oracle APEX applications, identifying bugs before release.
- Implemented deterministic scoring across **4 dimensions** for consistent evaluation of generated applications.
- Accelerated evaluations with parallel runs; added isolation, timeouts, token/trace dashboards and batch reports for risk-based release recommendations.

E2IP Technologies | **DevOps & IAM Intern** Jul 2025 - Sep 2025

Nouaceur, Morocco

- Developed SecureAuth with Django and React and deployed it on a local Windows Server.
- Integrated internal applications with Active Directory Federation Services (AD FS) using SAML 2.0 SSO; tested authentication flows, diagnosed failures and documented corrective actions.

GDS GED SERVICE | **Software Research Intern** Jul 2023 - Aug 2023

Bank of Africa affiliate | Casablanca, Morocco

- Digitized contracts and reports and helped define digitization procedures.
- Supported the operations team to improve workflow efficiency and data accuracy.

TECHNICAL SKILLS

Development: Python, JavaScript/Node.js, C/C++, Django, React, REST APIs, SQL, PL/SQL

Platforms: Oracle Database, PostgreSQL, Oracle APEX, APEXLang, Codex/LLM evaluation, MQTT

DevOps and CI/CD: Docker, Docker Compose, Kubernetes, Git, Jenkins, GitHub Actions, GitLab CI, Argo CD, GitOps

Infrastructure: Linux/Unix, Windows Server, Active Directory, Terraform, Ansible, Vagrant, Bash, Prometheus, Grafana

PROJECTS

ft_transcendence: Implemented Pong gameplay, AI-opponent logic and Django Channels WebSockets in a team project.

SmartBin: Built Dockerized microservices for waste management with Django REST APIs, MQTT sensor integration, NFC access, real-time bin monitoring and AI waste classification.

GreenCity Energy Analytics: Extracted and standardized MySQL, JSON and CSV energy data using Python and Pentaho, normalizing dates and removing duplicates.

Inception of Things: Configured multi-node Kubernetes with Vagrant, Bash, CI/CD and Argo CD GitOps.

EDUCATION

Engineering Degree in Computer Science | ENSA Tetouan 2020 - Sep 2026

42 Network Common Core Curriculum | 1337 MED / UM6P 2022 - Jan 2026

CERTIFICATIONS

Kubernetes and Cloud Native Associate (KCNA) | The Linux Foundation Sep 2025

Docker Foundations Professional Certificate | Docker Jun 2025

Oracle Cloud Infrastructure Certified Foundations Associate | Oracle Oct 2025

Oracle Data Platform Certified Foundations Associate | Oracle Apr 2026

Agentic AI Certified Foundations Associate | Oracle Sep 2026

LEADERSHIP

ADE ENSA Tetouan | President | Tetouan, Morocco Jan 2024 - Mar 2025

Led **10+ members** serving **1,000+ students**. Worked with faculty, organized events and workshops, managed budgets, and secured university and sponsor partnerships.

Languages: Arabic: Native | French: C1 (TCF) | English: Professional working proficiency