KACEM BOUFELLIGA

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Summary of Qualifications

Results-driven and visionary professional with extensive experience in designing and implementing cutting-edge solutions to drive excellence across software development and architecture.

Proven track record of delivering complex projects on time and within budget, while ensuring alignment with strategic business objectives. Demonstrated expertise in overseeing full software development lifecycle, from concept to deployment, with focus on scalable and sustainable architectures.

Hands-on Technical Architect with stellar record of leading development teams and actively contributing to coding process, blending technical expertise with strategic leadership.

Adept at leveraging innovative technologies and industry best practices to increase efficiency and enhance system performance. Instrumental in building/mentoring top-tier engineering teams, fostering collaboration, and empowering individuals to achieve organizational goals.

Technical Skills

Programming Languages & Frameworks: C++, Java (JDK 21), Python, C#, Clojure, ASP.NET, Nodejs, Spring Suite (Boot 3.2, Security, Cloud, Data), Apache Camel, Apache Kafka, RabbitMQ, MQTT, AMQP, XMPP, PULSAR, REST APIs, Microservices, GraphQL, CUDA, OpenCL, OpenGL, Vulkan, DirectX, PostgreSQL, MySQL, MongoDB, Snowflake, Oracle, MS SQL, JOOQ, Hibernate, Ibatis

AI/ML & Data Science: VGGNet, AlexNet, GoogleNet, ResNet, Scikit-learn, XGBoost, LightGBM, Deep Learning: CNN, LSTM, GAN, Transformers, Hugging Face Transformers, Stanford CoreNLP, spaCy, NLTK, BERT, OpenCV, YOLO, R-CNN, Caffe, Theano, Apache MXNet, NumPy, SciPy

Cloud & Infrastructure: AWS, Azure, Kubernetes, Docker, GitLab Pipeline, Travis CI, Terraform, Helm, Databricks, Apache Spark, Hadoop

Web Technologies: React.js, Angular, SwiftUI, Vaadin, Redux, MobX, Webpack, Babel,Tailwind, Material-UI, Jest, Cypress, TypeScript, JavaScript (ES6+)

Hardware: Raspberry Pi, NVIDIA Jetson, Odroid, UDOO x86, Arduino, IBM 308x-309x series mainframes running MVS (TSO Shell), DOS/VSE , IBM x.86 PCs/Servers running Windows and Linux

Languages: Native in English and French

Career Highlights

- Ensured legal compliance and met privacy requirements of all T-Mobile customers by constructing privacy platform with automated solutions to onboard both T-Mobile's internal/external applications.
- Developed automated and scalable solutions for identification by leveraging a variety of advanced techniques in artificial intelligence.
- Secured engagement in various transactions, from payments to purchase of telecommunications prepaid cards by implementing KYC automation for banking and telco industries through hardware and software solutions, while facilitating identification, analysis, extraction, and verification of customer information.
- Spearheaded innovation and excellence in software tooling by elevating technological narrative with precision and prowess.

Professional Experience

Exadel (formerly Coppei)

04.2021 – Present

Led multiple high-impact projects focusing on advanced simulation, AI, and enterprise solutions. Specialized in developing autonomous systems, supply chain optimization, and privacy platforms for major clients including US Air Force, Microsoft, and T-Mobile. Managed cross-functional teams while maintaining hands-on technical leadership.

Client: US Air Force
Position: Principal Software Engineer
Responsibilities included:

- Developed autonomous flight simulation MVP for US Air Force, incorporating Cesium Ion for navigation training
- Architected integration of AirSim with QGroundControl and PX4 server, implementing physics-based weather modeling and collision detection in Unreal Engine with real-world environmental conditions
- Created mission planning system with semantic segmentation models for terrain analysis
- Designed custom Unreal Engine plugins for AirSim Jet Controller

Client: Microsoft Global Data Center Division
Position: Principal Software Engineer
Responsibilities included:

- Architected end-to-end supply chain visualization platform integrating Azure Maps, Mapbox,, CesiumJS and Cesium Ion with Unreal Engine for comprehensive 2D/3D tracking of data center equipment
- Developed custom Unreal Engine plugin enabling bidirectional communication between embedded Chromium browser and Unreal Engine for seamless web-to-3D integration
- Created React-based dashboard with Node.js backend for monitoring global logistics network including ports, airports, warehouses, and assembly facilities
- Implemented multi-layer visualization system:
    - 2D routing and tracking using Azure Maps with Mapbox routing engine
    - 3D visualization in Cesium Ion with Google Photorealistic 3D Tiles
    - Real-time 3D facility visualization in Unreal Engine
- Created custom React components for seamless switching between 2D and 3D views of supply chain operations

Client: T-Mobile
Position: Solutions Architect
Responsibilities included:

Architect, construct, and deliver hands-on enterprise solutions for T-Mobile Privacy Platform to optimize functionality for organization. Oversee diverse Engineering, DevOps, and Testing teams, involving organizing daily stand-up meetings, coordinating working sessions, providing mentorship, conducting code reviews, and ensuring security compliance. Collaborate cross-functionally and employed Agile methodologies by engaging with multiple teams, such as legal, product, marketing, security/fraud, and 3rd party vendors.

- Automated onboarding of 1K+ internal/external systems for processing privacy requests across T-Mobile's customer base by spearheading conceptualization and delivery of agent-based solutions, while serving as Principal Architect and Developer.
- Generated reports for trends, auditing, compliance, and various other purposes by leading architecture, design, and development of reporting and analytics platforms for delivering insights to all privacy-related products.
- Delivered comprehensive designs, diagrams, specifications, user guides, documentation, and sample code for effective implementation and development processes.
- Led development of impactful proof of concepts, innovative tooling, and utilities to enhance efficiency and functionality within project as hands-on technical lead.

Technologies: C++, Java, Python, TypeScript, Spring Boot, Kafka, MuleSoft, Kubernetes, Azure Map, Azure Data Factory & Databricks, Spring Cloud, Hazelcast, Zookeeper, ReactJS, Nodejs, Vaadin Framework, MapBox, Unreal Engine, Cesium Ion, Snowflake, Oracle, MySql, PostgreSql, MsSql, Gitlab, GitGuardian, Selenium, OneTrust, Collibra, Hashicorp, Visual Paradigm

Neuron Edge Technologies LLC

12.2019 – 04.2021

Position: Enterprise Software Principal Architect
Responsibilities included:

Designed and executed scalable sensor platform connected to cloud by facilitating near real-time data collection and empowering customers in implementing automated adjustments. Utilized machine learning, reinforcement learning, GAN/LSTM networks, unsupervised learning methods, and integrated computer vision algorithms with OpenCV for advanced and efficient solutions. Crafted product roadmaps and specifications, encompassing hardware requirements, software API definitions, software architecture, user manuals, documentation, and technology selection.

- Contributed to development, refinement, prioritization, and execution of product strategy and roadmap by engaging with cross-functional teams in engineering, products, marketing, sales, client services, and business development.
- Created innovative solutions tailored for financial, telecommunication, and gaming industries by guiding team of 25 engineers and artificial intelligence scientists.
- Served millions of customers by handling real-time processing of billions of dollars and implementing thousands of self-service devices.

Technologies: Java, Python, Nodejs, Spring Boot, ReactJS, Hazlecast, MQTT, Tensorflow, Scikit, OpenCV, Graphite, Puppeteer, PostgreSql, AWS, Docker, Kubernetes, TravisCI

Speckeye Technology

06.2012 – 10.2019

Position: Enterprise Software Principal Architect
Responsibilities included:

Led architectural design and development of enterprise software solutions. Devised scalable, reliable, and high-performance software architecture to meet business goals. Collaborated with stakeholders to gather and understand business requirements and objectives.

- Achieved 99.3% accuracy in deciphering hand-written courtesy amounts by designing, formulating, and executing check processing platform with AI and Deep Learning engine.
- Managed annual volume surpassing €2B, incorporating Black-Scholes model by creating dynamic foreign exchange platform with currency options trading.
- Migrated Flash-based frontend of a currency trading platform to Angular, enabling real-time updates and order processing for forex and commodity trading. Including futures and options
- Secured 1M+ telecommunication contracts and generated financial reports daily by developing extremely scalable and automated contract validation platform.
- Streamlined KYC onboarding processes by developing Internet of Things (IoT) devices.

Fedaso || Orone Group

04.2010 – 05.2012

Position: Principal Architect - Software Development & Tooling
Responsibilities included:

Directed engineering R&D and onshore/offshore IT teams for successful project outcomes. Oversaw technology selection, product definitions, roadmaps, specifications, and development and delivery of multiple internal/external products for customers across diverse industries, including financial, insurance, retail, and government to meet specific needs of clients.

- Implemented Agile/Scrum methodology across various geographic locations by restructuring engineering team.
- Shifted from in-house applications to REST API Web Service Platforms by guiding strategic initiative.
- Developed EBP's public tender platform upgrade using C#.NET backend and ASP.NET frontend, implementing MVC design patterns and separation of concerns
- Migrated business logic from stored procedures to dedicated business layer with caching for improved scalability
- Created automated B2B tender matching system with custom notification engine for client defined criteria

Education

University of Michigan B.S. Mathematics , Minor Computer Science