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# Skills

## Proficiency

| | |
|---|---|
| **Backend** | ★★★★★ |
| **Formal Methods** | ★★★★☆ |
| **Performance** | ★★★☆☆ |
| **Frontend** | ★★☆☆☆ |

## Programming

Java

JavaScript

C • C++

BASH

SQL • MDX

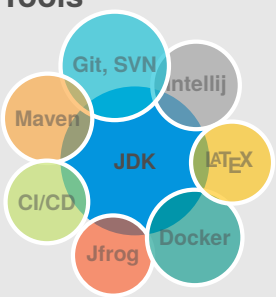
## Frameworks

| | |
|---|---|
| **Spring Cloud Sleuth** | ★★★★☆ |
| **Spring Boot** | ★★★★☆ |
| **React/Next.js** | ★★★☆☆ |

## Cloud Services

| | |
|---|---|
| **AWS - S3** | ★★★★☆ |
| **Azure** | ★★★☆☆ |
| **GCP** | ★★☆☆☆ |

## Tools




# Mahieddine Dellabani

Technical Engineering Manager

## About Me

Technical Engineering Manager with strong technical skills. Autonomous, self-motivated and curious, but mostly not afraid of new challenges and eager to learn new technologies. Open minded, sociable and used to work in a multicultural collaborative environment. As an engineering manager, I strive at making a great product for both users and developers : Foster innovation, promote best practice and ensure engineers' happiness.

## Experience

09/22 - Now **Technical Engineering Manager (6 people)** — ActiveViam, Remote, France

As part of the R&D team, I design and build Atoti, the in-memory real-time analytical database. Duties:

- Product Developement: Design, build, test and deploy of Atoti Java API capabilities: Aggregation engine, real-time updates, distributed computing, MDX querying
- Monitoring: Involved in enhancements and imlementations of Atoti Application Performance Monitoring stack: Tracing, metrics and logs. **Stack:** *Zipkin, Logstash, Grafana, Prometheus, Docker.*
- Support : Solving performance issues and help the clients using the APIs
- Internship and university project supervisor : Maximise the impact of new JDK capabilities in Atoti Java API LOOM and Panama)

**Keywords:** *In-Memory, Distributed System, Monitoring, REST, MDX, OLAP*.

09/18 - 06/19 **R&D Software Engineer** — INGIMA LABs, Paris, France

Responsible of R&D studies, proof of concepts development and their industrialization for clients and partners. Duties:

- State of the art and literature research
- Projects roadmap and clients meetings
- Architecture, development, testing and documentation

Projects:

- PackDiff: Extraction and comparison of PDFs text and graphical elements using different algorithms (Smith-Waterman/Needleman-Wunsh for text comparison and Hungarian algorithm for computing the best matches). The project was implemented as micro-services using spring-boot framework.
- OCR prototype for a client specialized in insurance brokerage and advice.

10/14 - 07/18 **Full Time Researcher (PhD)** — Verimag Laboratory, Grenoble, France

Formal Methods for Distributed Real-Time Applications.

Study and develop rigorous system design methodologies for Distributed Real-Time applications. These methods should be implemented through intermediate model transformation ensuring correctness, until reaching a concrete implementation.

**Keywords:** *Distributed Real-Time Systems, Formal Methods, Timed Automata, Verification, Communication Delays, Clock Drift.*

03/14 - 08/14 **Final Engineering Project** — SAP SE, Walldorf, Germany

Vectorization of compression algorithms using SIMD instructions:

- Leverage Intel new set of instructions (SSE4, AVX2) for high performance and optimization purposes
- Compression algorithms like Simple8/9 and Golum
- SAP HANA database concept
- Literature Research

## Soft Skills


## Languages

| | |
|---|---|
| English | ★★★★★ |
| French | ★★★★★ |
| Arabic | ★★★★★ |
| Spanish | ★★☆☆☆ |
| German | ★☆☆☆☆ |

12/13 - 03/14 **Internship** Transportation Research Center, University of Nevada, Las Vegas, USA
Business Intelligence Project for the Nevada Department Of Transportation:
- Dimensional modeling and Data warehouse conception
- Data integration, PL SQL

# Education

03/2019 **Machine Learning by Stanford University on Coursera.**
*Certificate earned at Wednesday, March 20, 2019 3:09 PM GMT (Link* **here***)*

2013 - 2014 **Exchange Student in Computer Engineering** Iowa State University, Iowa, USA
Main subjects: Advanced Computer Architecture, Reconfigurable Systems, Distributed Software Development.
*GPA: 3.89.*

2011 - 2014 **Engineering Diploma** Grenoble INP PHELMA/ENSIMAG, France
Specialization: Embedded Software and Systems.
Main subjects: Mathematics, Programming, Operational Research, Operating Systems, Real-Time Embedded Systems, Hardware Design.
*Thesis: "Vectorization of compression algorithms using SIMD instructions".*
*Realtors: Prof. S. Viardot, Ing. R. Schulze, Dr. T. Willhalm.*
*Thesis activity carried out during the final year project at SAP SE.*

2008 - 2011 **First Scientific University Cycle Degree** ENPEI, Algiers, Algeria
Engineering Scientific Preparatory School.
Main subjects: Mathematics, Physics, Computer Science.

# Projects

12/2013 **Reconfigurable System Project** Iowa State University, Iowa, USA
Working in pairs on the conception of an old school game (bricks) on a SPARTAN-3E FPGA: *Hardware Design, Keyboard and VGA Modules, Algorithmic, Vhdl*

06/2013 **Operating System - Project Manager & Developer** Grenoble INP ENSIMAG, Grenoble, France
Development of a Linux type operating system (C language):
- Virtual Memory, Processes Communication (Shared Pages, Message queues)
- User/Kernel Separation (ring 0 & ring 3)
- Keyboard & Mouse Drivers and multi-shell

01/2013 **Software Engineering Project** Grenoble INP ENSIMAG, Grenoble, France
4 persons team working on the implementation of a mini-java compiler: *Compilation Theory, Formal Language Theory, ADA & Assembly*

# Summer Schools

03/2015 **Engineering Autonomic Systems (ASCENS Project)** IMT, Lucca, Italy
*theoretical, practical, and technological issues related to collective self-aware autonomic systems - so-called ensembles.*

09/2017 **Mixed Criticality System (DREAMS Project)** UPV, Valencia, Spain
*Keynotes, tutorials and hands-on session delivered by academic and industry experts about advances in MCS.*

# Publications

M. Dellabani, J. Combaz, S. Bensalem, M. Bozga
**Local Planning Semantics : a Semantics for Distributed Real-Time Systems**
*Leibniz Transactions on Embedded Systems, Vol 6, No 1, 2019*

B.L. Mediouni, A. Nouri, M. Bozga, J. Combaz, A. Legay, S. Bensalem, M. Dellabani
**SBIP 2.0: Statistical Model Checking Stochastic Real-Time Systems**
*Automated Technology for Verification and Analysis - 16th International Symposium (ATVA 2018), Los Angeles,October 7-10, 2018*

M. Dellabani, J. Combaz, S. Bensalem, M. Bozga
**Knowledge Based Optimization for Distributed Real-Time Systems**
*Proceedings of the 24th IEEE Asia-Pacific Software Engineering Conference (APSEC 2017), Nanjing, China, December 4-8, 2017*

M. Dellabani, J. Combaz, S. Bensalem, M. Bozga
**Local Planning of Multiparty Interactions with Bounded Horizons**
*Proceedings of the 21st International Symposium of Formal Methods (FM 2016), Limassol, Cyprus, November 9-11, 2016*