Bahaa Eddine ELBAGHAZAOUI
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Researchgate : /Bahaa-Eddine-Elbaghazaoui

Professor @ ENSA Beni Mellal
Doctor in Computer Science and Artificial Intelligence
Software Engineering (over 5 years of experience)
FULLSTACK Developer: Java / Kotlin / Spring / React
Project Manager, Trainer

DEGREES

December 2023 **PhD** in Computer Science and Artificial Intelligence - Faculty of Sciences, Ibn Tofail University.
- **Thesis topic:** Data Profiling for Predictive Analysis and Decision Support in Social Networks
- **Defense committee:**

Chairman	ABOUCHABAKA Jaafar	**PES**	FSK, UIT
Reviewer	AIT KERROUM Mounir	**PES**	ENCG, UIT
Reviewer	BALOUKI Youssef	**PES**	FST, Settat
Reviewer	OUACHA Ali	**PH**	FSR
Examiner	FAKHRI Youssef	**PES**	FSK, UIT
Examiner	GHERABI Noreddine	**PH**	ENSAK, USMS
Co-Supervisor	CHOUKRI Ali	**PH**	FSK, UIT
Supervisor	Mohamed AMNAI	**PH**	FSK, UIT

2019 **Software engineer** - ENSA KHOURIBGA.
- **Specialization :** Software Engineering
- **Project :** Development of a mobile application for managing anomalies during phosphate extraction in OCP Group mines.

2013 **Baccalaureate** in Mathematical Sciences - Ibn Tofail High School, OUED ZEM.

PROFESSIONAL CERTIFICATS

Editor Certificats

Google Data Analytics, **Google**, Oct 2022, ID: GJJ5WU658VNR
Scrum Fundamentals Certified (SFC), **SCRUMstudy**, Jan 2022, ID: 891648
Lifelong Learning, **CertiProf**, Aug 2020, Aug 2022
Scrum Foundation Certificate, **CertiProf**, Aug 2020, Aug 2022
Risques liés au phishing, **SPVie**, 2023
Global Anti-Corruption, CGI, 2023 (ID: 50176305)
Our Commitment to a more inclusive and sustainable world, CGI, 2023 (ID: 52903515)
Security awareness Training, **CGI**, 2023 (ID: 50188232)
Records Management, **CGI**, 2023 (ID: 50185100)
Data Privacy – Fundamentals, **CGI**, 2023 (ID: 50181872)
Code of Ethics and Business Conduct, **CGI**, 2023 (ID: 50131107)

Training Certificats

Introduction to Data Science, **Cognitive class**, Jan 2021
Front End Libraries, **FreeCodeCamp**, Dec 2020
Oracle Java Explorer, **Oracle University**, 2022
Node.Js **Pentalog HR**
React.Js **Pentalog HR**

TEACHING EXPERIENCE _____

Permanent Professor – ENSA Beni Mellal (Nature: Courses, Tutorials, and Practical Work)

Teaching	Volume	Audience	Year
Performance Management and Dashboard	45h	Engineering in Industrial Digital Transformation	2024
	Monitoring, Measurement, Analysis, Feedback, KPI, PowerBI, KNIME		
Software Engineering	45h	Engineering in Industrial Digital Transformation	2024
	Life Cycle, Design Pattern, Scrum & Kanban, DevOps (CI/CD) , Jenkins, Java		

Adjunct Lecturer in Computer Science - IBN TOFAIL University, Kenitra

Teaching	Volume	Audience	Year
Artificial Intelligence	45h	Master's in Big Data & Cloud Computing (MSBDCC)	2023
	Deep Learning, Neural Networks, Natural Language Processing (NLP), Computer Vision, Intelligent Agents, Genetic Algorithms, Generative AI		
Python Programming	45h	MSBDCC	2022
	Python Syntax, Data Structures, Object-Oriented Programming, Libraries (NumPy, Pandas, Matplotlib), Web Scraping, Flask API		
Virtualization & Cloud Computing	45h	MSBDCC	2021
	Virtualization, Hypervisors, Cloud Computing (IaaS, PaaS, SaaS), Docker, Kubernetes, Cloud Security, Cost Optimization		
Fundamentals of Algorithms: Big Data & Machine Learning	45h	MSBDCC	2020
	Algorithms, Complexity, Big Data, Machine Learning, Regression, Classification, Clustering, Scikit-learn, KNIME		
Operating Systems: Linux / Unix	80h	Bachelor's in Database Administration & Web Development	2020 / 2021
	UNIX/Linux Architecture, Shell Commands, Process Management, File Systems, Security and Permissions, Networking, Shell Scripting, System Administration		

Trainer – ZenithSoft

Module	Volume	Audience	Year
Generative AI with Spring AI	40h	ZenithSoft	2024
	Spring AI, Machine Learning, Chatbots, TensorFlow		
Spring Security & Keycloak	40h	Ministry of Agriculture, Maritime Fisheries, Rural Development, and Waters and Forests	2024
	Spring Boot, Spring Security, Keycloak, JWT		
DevOps	40h	Ministry of Agriculture, Maritime Fisheries, Rural Development, and Waters and Forests	2024
	DevOps, Git, CI/CD, Gitlab, Docker, Docker compose		
Reactive Programming with WebFlux	40h	Ministry of Tourism, Handicrafts, and Social and Solidarity Economy	2023
	Spring boot, Webflux, Streams, API, Async		
Java, Spring & Spring boot	40h	Ministry of Tourism, Handicrafts, and Social and Solidarity Economy	2024
	Java, Spring, Spring boot, Spring Data, Rest, MySQL, H2		
Distributed Systems and Microservices	40h	Ministry of Agriculture, Maritime Fisheries, Rural Development, and Waters and Forests	2022
	Microservices, Euruka, Getway, registry, API, Spring Cloud, Spring boot		
Data Analytics	40h	Ministry of Agriculture, Maritime Fisheries, Rural Development, and Waters and Forests	2022
	Data, Vusialisation, prediction, big data, clustering, classification		

Period	Organization	Role
03 / 2024 – 08 / 2024	Intelcia ITS – Morocco / France	Senior Technical Expert

Project : Fast & Fastr with SFR: A collaborative initiative aimed at improving the efficiency and capabilities of telecommunications technologies through advanced research and development.
Responsibilities:
- Modernizing Fast to Fastr with a microservices approach
- Integrating AI (Fastr-AI)
- Creating UI components
- Conducting code reviews
- Microservices separation
- Automating processing workflows
- Applying craftsmanship approach

Team: Architect, 6 Developers, Manager, 2 POs, and 2 BAs
Environment: Java 17, Spring Boot +3, Kafka, Sinequa, Spring Batch, React, Redux, MongoDB

Period	Organization	Role
08 / 2023 – 03 / 2024	SPVie Assurances – Morocco / France	Senior FULLSTACK JAVA Developer

Project: Santé Log, an electronic contract management tool covering membership, document management, and claims.
Responsibilities:
- Modernizing the existing system with a microservices approach
- Developing dedicated catalog with BeanIO
- Generating PDFs with CarboneIO
- Managing storage with MinIO
- Converting images with ImageMagick
- File transfer with Spring Integration
- Orchestrating jobs with Spring Cloud Data Flow (SCDF)
- Developing a dashboard portal with Vaadin

Team: Architect, Manager, PO, and 4 Developers
Environment: Java 19, Spring Boot +3, Docker, Azure, Nexus, MinIO, Spring Batch, Postgres, Informix

Period	Organization	Role
01 / 2024 – 08 / 2024	ZenithSoft - Morocco	Project Manager

Project: MPM/PDA: Redesigning an embedded PDA application to a web & mobile application for the Ministry of Agriculture and Maritime Fisheries.
Responsibilities:
- Analyzing specifications
- Drafting technical specifications
- Designing UI/UX
- Assisting the team with design & technical challenges
- Developing Android mobile app with KMM & Jetpack Compose
- Developing frontend with React
- Implementing security and session management with Keycloak
- Conducting code reviews
- Establishing the application foundation
- Ensuring code quality

Team: Project Manager and 3 Developers
Environment: Kotlin, KMM, Jetpack Compose, Zebra printer, Keycloak, Offline Sync mode

Period	Organization	Role
02 / 2023 – 07 / 2023	Axelor - France	Senior FULLSTACK JAVA / REACT Developer

Project: Axelor Platform, providing a comprehensive and customizable enterprise application development platform for BPM, CRM, and ERP.
Responsibilities:
- Mastering the Axelor framework (AOS, AOP, Webapp)
- Optimizing processes and threads in the framework

- o   Integrating client projects with Axelor
- o   Creating generic widgets for the frontend
- o   Using Carbone.io for document generation

Environment: Java 11, React 18, Google Guice, Axelor, Docker, Postgres

07 / 2020 – 02 / 2023	Ministry of Interior - Morocco	Confirmed FULLSTACK JAVA / REACT Developer

Project: Cri-Invest: A platform for launching and tracking projects, providing information for regional investment centers in Morocco.
Responsibilities:
- o   Analyzing specifications and proposing solutions
- o   Estimating complexity and effort for stories
- o   Drafting technical specifications
- o   Developing backend and frontend tasks
- o   Writing unit tests (JUnit, Mockito, Jest, Enzyme)
- o   Participating in Scrum meetings
- o   Conducting code reviews
- o   Version management with GIT
- o   Maintaining code quality (SOLID, Clean Code)

Team: 1 Product Owner, 1 Scrum Master, 6 Developers, 2 Business Analysts
Environment: Java 8 (Spring Boot 2.7), React 16, GitLab, SQL Server, Trello, Postman, Jasper iReport

Project: Civil Status: Creating jobs to retrieve, transform, and analyze civil data (births, marriages, deaths) to generate statistics and reports.
- o   Designing the project
- o   Developing APIs following documentation
- o   Automating processes with jobs
- o   Managing multiple databases
- o   Ensuring code quality and optimization
- o   Conducting client meetings for documentation

Team: Architect and Developer
Environment: Java 11, Spring Boot, Spring Batch, Swagger, Liquibase, REST API, Postgres & SQL Server

09 / 2019 – 06 / 2020	ZenithSoft- Morocco	Junior FULLSTACK JAVA / REACT Developer

Project: Assar: Development and maintenance of a web application providing agricultural product pricing information for the Ministry of Agriculture.
Responsibilities:
- o   Full stack development from scratch
- o   Analyzing specifications
- o   Drafting technical specifications
- o   Developing backend and frontend tasks
- o   Assisting the team with design & technical challenges
- o   Conducting code reviews
- o   Setting up the application foundation
- o   Ensuring code quality

Team: Manager and 3 Developers
Environment: Java 8, Spring, React, GitLab, Trello, Postman, MongoDB

03 / 2019 – 07 / 2019	OCP SA / Digital Factory - Morocco	End-of-Studies Intern

Project: Prospektor: Development of a mobile application for managing anomalies during phosphate extraction in OCP mines.
Responsibilities:
- o   Analyzing specifications
- o   Drafting technical specifications
- o   Developing frontend tickets (design and technical aspects)
- o   Presenting to the client
- o   Participating in Scrum meetings
- o   Version management with GIT
- o   Ensuring code quality

Team: Product Owner, Designer, Scrum Master, and 4 Developers
Environment: Android Native, Java, Retrofit, JUnit, Mockito, Espresso

Journal Articles

- Elbaghazaoui, Bahaa Eddine, Mohamed Amnai, and Youssef Fakhri. *Predicting the next word using the Markov chain model according to profiling personality.* The Journal of Supercomputing (2023): 1-16. Q1, IF 3.3; CiteScore: 4.8; SNIP: 1.16. 10.1007/s11227-023-05125-2
- Elbaghazaoui, Bahaa Eddine, Mohamed Amnai, and Youssef Fakhri. *Predicting user behavior using data profiling and hidden Markov model.* International Journal of Electrical & Computer Engineering (2088-8708) 13.5 (2023). Q2. CiteScore: 3.8; SNIP: 0.704. 10.11591/ijece.v13i5.pp5444-5453
- Elbaghazaoui, Bahaa Eddine, Mohamed Amnai, and Youssef Fakhri. *Data profiling and machine learning to identify influencers from social media platforms.* Journal of ICT Standardization (2022): 201-218. Q3. CiteScore: 0.6; SNIP: 0.34. 10.13052/jicts2245-800X.1026
- Semmouri, A., Jourhmane, M., Elbaghazaoui, B.E. **Markov decision processes with discounted costs: New test of non-optimal actions.** Journal of Advanced Research in Dynamical and Control Systems, 2020, 12(5 Special Issue), pp. 608–616 Q3. CiteScore: 0.6; SNIP: 0.34.
- Semmouri, A., Jourhmane, M., Elbaghazaoui, B.E. **Discounted markov decision processes with constrained costs: The decomposition approach**. E3S Web of Conferences Q4. 2021, 229, 01047

Book chapter

- Elbaghazaoui, Bahaa Eddine, Mohamed Amnai, and Youssef Fakhri. *Influencer Profiling to Identify the Top Keywords Using LDA.* Computer Networks and Inventive Communication Technologies: Proceedings of Fifth ICCNCT 2022. Singapore: Springer Nature Singapore, 2022. 377-388.
- Elbaghazaoui, Bahaa Eddine, Mohamed Amnai, and Youssef Fakhri. *Voice Recognition and User Profiling*. International Conference on Cybersecurity, Cybercrimes, and Smart Emerging Technologies. Cham: Springer International Publishing, 2022.
- Elbaghazaoui, Bahaa Eddine, Mohamed Amnai, and Youssef Fakhri. *Optimized influencers profiling from social media based on Machine Learning.* Advances in Information, Communication and Cybersecurity: Proceedings of ICI2C'21. Springer International Publishing, 2022.
- Elbaghazaoui, Bahaa Eddine, Mohamed Amnai, and Youssef Fakhri. *User Profiling and Influence Maximization*. Mobile Computing and Sustainable Informatics: Proceedings of ICMCSI 2022. Singapore: Springer Nature Singapore, 2022. 221-232.
- Elbaghazaoui, Bahaa Eddine, Mohamed Amnai, and Abdellatif Semmouri. *Data profiling over big data area: a survey of big data profiling: state-of-the-art, use cases and challenges*. Intelligent Systems in Big Data, Semantic Web and Machine Learning. Cham: Springer International Publishing, 2021. 111-123.

Conference paper

- Elbaghazaoui, Bahaa Eddine, et al. *Event Profiling in Social Media: A Survey with an Application*. 2024 IEEE 4th International Conference on Innovative Research in Applied Science, Engineering and Technology (IRASET'2024). IEEE, 2024.
- Elbaghazaoui, Bahaa Eddine, et al. *Profiling Language Sign Using Deep Learning*. 10th International Conference on Wireless Networks and Mobile Communications (WINCOM).2023 IEEE, 2023.
- Elbaghazaoui, Bahaa Eddine, et al. *Human profiling based on computer vision: A survey with application*. 2022 IEEE 3rd International Conference on Electronics, Control, Optimization and Computer Science (ICECOCS). IEEE, 2022.
- Elbaghazaoui, Bahaa Eddine, Mohamed Amnai, and Youssef Fakhri. *Influencer Profiling to Identify the Top Keywords Using LDA.* Computer Networks and Inventive Communication Technologies: Proceedings of Fifth ICCNCT 2022. Singapore: Springer Nature Singapore, 2022. 377-388.
- Elbaghazaoui, Bahaa Eddine, Mohamed Amnai, and Youssef Fakhri. *User Profiling and Influence Maximization*. Mobile Computing and Sustainable Informatics: Proceedings of ICMCSI 2022. Singapore: Springer Nature Singapore, 2022. 221-232.
- Elbaghazaoui, Bahaa Eddine, Mohamed Amnai, and Youssef Fakhri. *Voice Recognition and User Profiling*. International Conference on Cybersecurity, Cybercrimes, and Smart Emerging Technologies. Cham: Springer International Publishing, 2022.
- Elbaghazaoui, Bahaa Eddine, Mohamed Amnai, and Youssef Fakhri. *Optimized influencers profiling from social media based on Machine Learning*. Advances in Information, Communication and Cybersecurity: Proceedings of ICI2C'21. Springer International Publishing, 2022.

OTHER CONTRIBUTIONS

- Semmouri, A., Jourhmane, M., Elbaghazaoui, B.E. **Markov Decision Processes with Discounted Rewards: Improved Successive Over-Relaxation Method**. Lecture Notes in Networks and. 2022, 357 LNNS, pp. 229–238
- Semmouri, A., Jourhmane, M., Elbaghazaoui, B.E. **Markov Decision Processes with Discounted Rewards: New Action Elimination Procedure.** Lecture Notes in Business Information Processing, 2021, 416 LNBIP, pp. 223–238

JOURNAL REVIEWER

- Peer review (43 reviews - 6 publications/grants)
  - **Applied intelligence.** (22)
  - **Education and information technologies**. (9)
  - **International journal of information security and privacy**. (2)
  - **Soft computing**. (6)
  - **The journal of supercomputing**. (3)
  - **Frontiers in Digital Health** (1)

CONFERENCE REVIEWER

Name	Start Date	Location	External URL
4th International Conference on Computer Vision and Robotics	5/24/2024	Pune, India	https://scrs.in/conference/cvr2024
4th International Conference on Paradigms of Communication, Computing and Data Analytics	4/20/2024	Rishikesh, India	https://scrs.in/conference/pccda2024
International Conference on Business Intelligence and Data Analytics	4/5/2024	RVIM Bangalore, India	https://scrs.in/conference/bida2024
International Conference on Computing and Machine Learning	3/29/2024	Sikkim, India	https://scrs.in/conference/cml2024
5th World Conference on Artificial Intelligence: Advances and Applications	2/24/2024	Udaipur, India	https://scrs.in/conference/wcaiaa2024
2nd Congress on Control, Robotics, and Mechatronics	2/3/2024	New Delhi, India	https://scrs.in/conference/crm2024
6th International Conference on Communication and Computational Technologies	1/12/2024	RIET Jaipur, India	https://scrs.in/conference/iccct2024
Congress on Smart Computing Technologies	12/2/2023	New Delhi, India	https://scril.sau.int/csct23/
International Conference on Computational Intelligence	11/4/2023	Delhi, India	https://scrs.in/conference/icci2023
5th International Conference on Sustainable and Innovative Solutions for Current Challenges in Engineering & Technology	10/20/2023	Gwalior, India	https://scrs.in/conference/icsiscet2023
2nd International Conference on Advances in Data-driven Computing and Intelligent Systems	9/21/2023	Goa, India	https://scrs.in/conference/adcis23
2023 IEEE World Conference on Applied Intelligence and Computing	7/29/2023	Sonbhadra, India	https://aic2023.scrs.in/
2022 IEEE World Conference on Applied Intelligence and Computing	6/17/2022	Sonbhadra, India	https://www.aic2022.scrs.in/

Supervisor

IBN TOFAIL University, Kenitra

Student	Year	Subjet
Fatima Karhich	2024	Scraping LinkedIn Profiles for Data Analysis
Mahalmadane Mahamane Toure	2024	Contextual Profiling and Error Correction in Natural Language Processing
Mostapha Hanich	2022	Design and Development of a Medical State Monitoring Application
Mohammed Ziyad Mansouri	2022	Vocal Data Profiling and Machine Learning for Gender Identification and Prediction

ZENITHSOFT

Name	Date	Duration	Subjet
Nassima Rhannouch	07/2023	2 months	Hotel Management Application using MERN Stack
Nouhayla ELassouli	07/2023	2 months	Hotel Management Application using MERN Stack
Khalil Soussane	07/2022	2 months	Backend Development of a Web Commercial Management Application with Spring Boot & Spring Security
Moad Rhannoumi	07/2021	2 months	Creating a Web Application for Managing Lawyers' Documents with Spring Boot & React

Technical Skills

Programming Languages: Java, Kotlin, JavaScript (TypeScript), Python
Back-End Technologies: Spring, Spring Boot, Flask, Node.js (Express, Koa, etc.)
Front-End Technologies: React, Redux, Angular
Mobile Development: Android Native (Java & Kotlin), Flutter, React Native
Testing Frameworks: JUnit, Mockito, Jest
Architectural Environment: Design Patterns, Clean Code, TDD (Test-Driven Development), BDD (Behavior-Driven Development)
Code Architecture: MVC, MVVM, MVP, Multi-tier (n-tier), Hexagonal Architecture, Clean Architecture
Microservices: Spring Cloud (Eureka, Gateway, Config Server, etc.)
Batch Processing: Spring Batch, Spring Cloud Data Flow
Security: Spring Security, Keycloak
Documentation: Swagger
DevOps: Docker, Git, CI/CD (Jenkins, GitLab, Bitbucket), JMS (RabbitMQ & Kafka)
Cloud Platforms: OVH, Azure
Agile Methodologies: SCRUM, SAFe
Modeling: UML, Merise
Databases: SQL Server / T-SQL, Oracle / PL-SQL, MongoDB, Couchbase, Neo4j, MySQL, Postgres, H2, etc.
Caching: Redis, Memcached
API Development: REST, SOAP, GraphQL
Tools: Eclipse & Spring Tool Suite, IntelliJ, Android Studio, Visual Studio, Adobe Suite, Microsoft Office Suite, Postman

Languages

Arabic, French, and English

Centres D'interets

Travel, Reading, Current Events