Abderrazak DAOUDI

PhD in AI — Expert in Machine Learning and Optimization

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Profile Summary

PhD in **Artificial Intelligence** and **Data Science** with over 8 years of experience in higher education, applied research, and AI project management. Expert in **Machine Learning**, **Deep Learning**, **Data Mining**, and **Optimization**. Passionate about developing innovative AI solutions and implementing them in industrial contexts. Rigorous, autonomous, and creative, I aim to leverage my skills in the development of high-impact AI products.

Areas of Expertise

Artificial Intelligence • Machine Learning • Deep Learning • Data Science • AI Product Management • Agile Methodologies • Constraint Programming • Optimization • Software Development

Professional Experience

Lecturer – Educational Manager *CESI School of Engineering* **Reims, France** *Sept. 2018 – Present*

- **Management of educational products in AI and Data Science**: Designing and coordinating AI training programs aligned with market needs.
- **Project leadership**: Supervising student projects aimed at developing innovative AI solutions, applying agile methodologies (Scrum, Kanban).
- **Management and leadership**: Managing an educational team, recruiting and training instructors, coaching students.
- **Quality and continuous improvement**: Ensuring customer satisfaction and compliance with quality standards (ISO 9001).

Lecturer-Researcher in Computer Science *INSA Lyon* **Lyon, France** *2017 – 2018*

- **Program design**: Developing courses in **Machine Learning** and **Data Science**, integrating user-centered approaches.
- **Project supervision**: Overseeing student projects focused on developing AI applications with user-friendly interfaces.
- **Applied research**: Developing a new constraint learning algorithm with experimental validation (Python, Scikit-learn).

Lecturer-Researcher in Computer Science *Jean Monnet University* **Saint-Étienne, France** *2016 – 2017*

- **Development of a simulator for optimized sensor network deployment**: Integrating optimization algorithms to improve deployment efficiency (Java, CPLEX).
- **Creation of an intuitive user interface**: Developing a GUI to manage parameters and visualize simulation results.
- **Use of GIS for 3D deployment**: Applying Geographic Information Systems to enable 3D deployment of sensors in complex environments.
- **Implementation of advanced algorithms**: Optimizing coverage and efficiency of sensor networks in varied terrains.
- **Teaching**: Training and supervising undergraduate computer science students (SQL, Web, MySQL, Algorithms, Eclipse).

R&D Engineer – PhD Candidate *CNRS/LIRMM, University of Montpellier* **Montpellier, France** *2013 – 2016*

- **Research in AI**: Developing **Machine Learning** algorithms for constraint learning.
- **Constraint programming**: Designing and implementing constraint models for solving complex problems.
- **Project management**: Planning and executing the PhD project, coordinating with research supervisors.
- **Scientific publication**: Writing reports and articles published in international conferences (IJCAI, ECAI).

R&D Engineer *EU FET-Open ICON Project, CNRS* **Montpellier, France** *2013 – 2014*

- **Data Mining**: Utilizing advanced techniques for learning constraints from data.
- **European collaboration**: Working within an international consortium, coordinating with partners to achieve project objectives.
- **Development and validation**: Implementing proposed algorithms and conducting experimental validation (Java, Python, R).

R&D Engineer *LIA, University of Avignon* **Avignon, France** *2011 – 2012*

- **Development of a simulator for optimized sensor network deployment**: Integrating optimization algorithms to improve deployment efficiency (Java, CPLEX).
- **Mathematical modeling**: Developing a model to optimize sensor deployment (CPLEX).
- **Software development**: Designing and modeling the application with a user interface (Java, XML, GIS).
- **Testing and validation**: Performing unit tests and experiments (JUnit).
- **Publication**: Writing a research report and a scientific article in English.

Education

PhD in Computer Science *University of Montpellier* **Montpellier, France** *2016*
Specialization: Artificial Intelligence
Thesis: "Constraint Learning for Solving Complex Problems"
Publications: IJCAI-16, ICTAI-15, ECAI-14

Master's Degree in Computer Science, Telecommunications, and Imaging *Mohammed V University* **Rabat, Morocco**
Specialization: Artificial Intelligence

Technical Skills

- **Programming Languages**: Python, Java, C/C++
- **ML Frameworks and Libraries**: Scikit-Learn, TensorFlow, PyTorch, Keras
- **Optimization & Constraints**: CPLEX, Choco Solver, Google OR-Tools
- **Big Data**: Spark, Hadoop, Elasticsearch, Kibana
- **Databases**: MySQL, MongoDB, PostgreSQL
- **Data Visualization**: Matplotlib, Seaborn, Plotly, Power BI
- **ML Deployment**: FastAPI, Flask, Docker
- **Version Control**: Git, SVN
- **Development Environments**: Jupyter Notebook, PyCharm, Visual Studio Code, Eclipse
- **Agile Methodologies**: Scrum, Kanban

Functional Skills and Soft Skills

- **Project Management**: Planning, coordination, monitoring; collecting user's needs, writing requirements, and managing backlog priorities.
- **Leadership**: Team management, coaching, talent development.
- **Communication**: Excellent written and verbal skills, effective presentations.
- **Collaboration**: Working in multidisciplinary teams, active listening, constructive feedback.
- **Adaptability**: Ability to navigate complex and uncertain environments.
- **Problem Solving**: Analytical thinking, creative approach to technical challenges.

Languages

- **French**: Fluent
- **English**: Professional proficiency