Malika Bendechache

Personal Data

Address: Flat 6, 4 Grosvenor Place,
Rathmines, Dublin 6, Ireland
Phone: +353 831616205
email: malika.bendechache@ucd.ie

Summary

I am currently a Post-Doctoral Researcher in Computer Science at CONSUS research centre, University College Dublin (UCD), Ireland, in collaboration with Origin Entreprises PLC. I Apply machine learning techniques on real agriculture data to improve sustainable crop production and management techniques, which will lead to more efficient food production with lower environmental impacts. People see me as enthusiastic, focused and hard worker.

I obtained my PhD thesis in Computer Science in Insight Centre for Data Analytics, UCD. I have finished my PhD within 3 years. I have a strong background in Data Mining, Machine Learning, Big Data Analysis, and Distributed Systems. My PhD topic was 'Study of Distributed Dynamic Clustering Framework for Spatial Data Mining': I proposed and developed a new distributed data mining framework to analyse Big Data within reasonable response time and produce accurate results while dealing with issues of high performance computing (5 publications).

WORK EXPERIENCE

Now JAN 2018	**Post-Doctoral Researcher** *CONSUS Research Centre, UCD, Ireland.* Applying machine learning techniques to improve sustainable crop production and management techniques, optimising crop production efficiency, which will lead to more efficient food production with lower environmental impacts.
JAN 2018 JAN 2015	**PhD student** *Insight Centre for Data Analytics, UCD, Ireland.* Study of Distributed Dynamic Clustering Framework for Spatial Data Mining (5 Publications).
JUN 2017 AUG 2017	**Mentoring a MSc student during his internship** *Insight Centre for Data Analytics, UCD, Ireland.* Implementing a distributed clustering algorithm using MapReduce.
JAN 2015 CURRENT	**Teacher Assistant and Demonstration** *UCD, Ireland* Planning and delivering well-structured lab sessions which engage and motivate students in Cloud Computing (M.Sc), Data Mining (M.Sc), Java (3rd year) and Information Theory (2nd year).
JAN 2015 CURRENT	**Tutor and IT Support** *UCD, Ireland* Providing an academic support to computer science students and helping them to understand course materials that they are struggling with.
JAN 2013 MAR 2013	**Research Internship** *General and Parallel Computational Research Group (PCRG), UCD, Ireland* Modelling of a distributed intelligent system as a multi-objective optimisation problem for solving the problem of distributed data mining.
SEPT 2012 JAN 2014	**Research Internship** *Erasmus Mundus, Averroes scholarship, Waterford Institute of Technology (WIT), Waterford, Ireland* Data mining techniques And distributed intelligent systems.
NOVEMBER 2008 MARCH 2009	**Internship at Corps Gras de Bejaia (CO.G.B.Belle) company** *Bejaia, Algeria* Designing and developing an advertisement web site for the company.
MARCH 2008 MAY 2008	**Internship at Vice Rectorate for the promotion of Scientific Research and External Relations.** *University of A-Mira of Bejaia, Algeria* Designing and developing a web application for management of research projects.

Education

January 2018	PhD in Computer Science, **University College Dublin**, Ireland. Title: "Study of Distributed Dynamic Clustering Framework for Spatial Data Mining." | Advisor: Prof. M-Tahar Kechadi.
January 2014	Researcher in Data Mining and Distributed System. **Waterford Institute of Technology (WIT), Waterford, Ireland.** Scholarship of 18 months. Subject: Data Mining Techniques and Distributed Intelligent Systems. | Advisor: Dr. Mícheál Ó héigeartaigh
July 2010	MSc in Networks and Distributed Systems (Ranking: 1st /192). **University A-Mira of Bejaia**, Algeria. Thesis: "Study of a performance model for peer to peer networks." | Advisor: Dr Abdelkamel Tari and Prof. M-TAHAR Kechadi.
July 2008	BSc in Computer Science. **University A-Mira of Bejaia**, Algeria.

Activities and Honours

HONOURS

July 2015	Best paper at International Conference on Spatial Data Mining (ICSDM-2015). **Paper Title**: Distributed Clustering Algorithm For Spatial Data Mining.

ACTIVITIES

July 2016	Mentoring BT Young Scientist Business Bootcamp working on the commercial and social development of their projects at NovaUCD.
June 2016	Participating in the Insight hackathon for data science.
March 2016	Mentoring and encouraging teenage girls and their parents in GirlsHackIreland event to consider careers in STEM (science, technology, engineering and maths).

Languages

Berber:	Mothertongue
English:	Fluent
French:	Fluent
Arabic:	Fluent

Skills

Data Analysis:

- **Data Preparation:** data cleaning and pre-processing.
- **Machine Learning, Data Mining and Data Analytics:** Classifications, Association, Clustering, etc..
  Big Data Management and Processing.
- **Data Mining tools:** Weka and RapidMiner.

Various Programming Skills:

- Data structures, Graphs and algorithms complexity analysis.
- **Programming and scripting languages:** HTML, Python, Bash, Java, Latex, PHP.
- **Graphical User Interfaces:** IDE: Eclipse, NetBeans and Code::Blocks.
- **OS:** Windows, Linux and Mac.
- **Databases:** MYSQL, MongoDB, and Cassandra.
- **Multi-Agent Systems:** JAVA Agent Development Framework (JADE).
- **Parallel and Distributed Systems:** Apache Hadoop and Map-Reduce.

INTERESTS AND ACTIVITIES

Technology, running, reading, travelling and playing foosball.

PUBLICATIONS

Journals

1. Malika Bendechache, Tari A-Kamel, and M-Tahar Kechadi. Parallel and distributed clustering framework for big spatial data mining. *International Journal of Parallel, Emergent and Distributed Systems*, 0(0):1–19, 2018

Conferences / Workshops

1. Malika Bendechache, Nhien-An Le-Khac, and M-Tahar Kechadi. Performance evaluation of a distributed clustering approach for spatial datasets. In *15th International Conference on Australasian Data Mining Conference (AusDM)*. CRPIT, 2017

2. Malika Bendechache, Nhien-An Le-Khac, and M-Tahar Kechadi. Hierarchical aggregation approach for distributed clustering of spatial datasets. In *16th International Conference on Data Mining Workshops (ICDMW)*, pages 1098–1103. IEEE, 2016

3. Malika Bendechache, Nhien-An Le-Khac, and M-Tahar Kechadi. Efficient large scale clustering based on data partitioning. In *International Conference on Data Science and Advanced Analytics (DSAA)*, pages 612–621. IEEE, 2016

4. **Best Paper Award:** Malika Bendechache and M-Tahar Kechadi. Distributed clustering algorithm for spatial data mining. In *2nd International Conference on Spatial Data Mining and Geographical Knowledge Services (ICSDM)*, pages 60–65. IEEE, 2015