Reda Nezzar, Ph.D.

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Summary

Ph.D. in Machine Learning; experienced software engineer with strong fundamentals in object-oriented design and data structures; proficient in core Java; researcher with international publications and presentations; substantial and solid background in programming, mathematics, machine learning, data analysis and databases; all aspects of use of C++, Python, JavaScript, Typescript, R, and Matlab.

Professional Experience

2018-Present **Software Engineer**
Databrary (*link*)- New York University - New York City, USA
Databrary is a data library to share research data and analytical tools with other investigators. It is a web-based repository for open sharing and preservation of video data and associated metadata in the behavioral sciences. Databrary is complemented by an open-source video-coding software called Datavyu (*link*). As the lead software engineer for Datavyu and full-stack developer for Databrary, I am in charge of the entire software lifecycle — from requirements, sprint planning to development, test and deployment. This includes maintaining and improving Datavyu software; rewriting the Databrary platform using NodeJS and VueJS; shipping a frame-accurate media player based on C/C++ and Java for Datavyu; managing up to three Linux servers with emphasis on availability; providing custom JavaScript and Python scripts to help Databrary Principal Investigators overcome platform limitations and increase productivity.

2015-2018 **Point Of Sales (POS) and Database Administrator**
A Matter of Health, Inc. - New York City, USA
A Matter of Health (AMOH) is a health food chain comprising six stores in New York with more than 200 staff. As Point Of Sales (POS) and Database Administrator, I had responsibility for the performance, integrity, security of the POS databases, and for enhancing the capabilities of the POS databases at multiple AMOH locations. This included installation and configuration of Windows and SQL servers on virtual machines; pulling and mapping data from the POS server to the associated SQL server; designing backup

routines; writing T-SQL procedures to update and maintain more than 50,000 records on a regular basis, designing and sharing reports to the different managers; and troubleshooting, monitoring, and maintaining networking and hardware issues.

Research Experience

2012-2014 **Data Scientist**
UBMA - Annaba, Algeria
In a collaboration project between Sonelgaz, Algeria's State-owned electricity generation, supply, and distribution organization, UBMA, and the LabGED Laboratory for the creation of a mid- to long-term load forecasting software capability for Sonelgaz, I was the only Ph.D. student selected to contribute to the design of the predictive model to be used. This involved developing an in-depth understanding of the related functioning of power generation and distribution; data cleaning and analysis, models designing, validating and testing using R and Matlab Statistics and Machine Learning Toolbox; creating 44 alternative predictive models using statistical learning able to perform with a small data sample (11 years) a nationwide yearly long-term (up to 30 years) load forecasts for Algeria's future electrical power management and planning; proposed, designed, and published a novel approach for the mid-term load forecast based on Artificial Neural Networks and Seasonal Decomposition, and outperformed state-of-the-art benchmark models.

2012-2014 **Software Developer**
UBMA - Annaba, Algeria
As a follow-on from the Data Scientist role, I was given the responsibility for the associated software implementation, including the integration of the various mathematical models, designing and finalizing related graphical interfaces using C# libraries such as DevExpress and Krypton and a NoSQL Object-Oriented Database Management System OODBMS, de-bugging and testing, pre-commissioning, and final commissioning.

Teaching Experience

2011-2013 **Teaching Assistant**
UBMA - Annaba, Algeria
Responsible for up to four groups of students at any one time (average group size = 25). Supplementing the activities of the teachers by providing additional guidance and support to slower students, preparing and issuing additional work to students, preparing interim tests during the academic year, and grading the resultant papers. Supervising final exams and grading the associated papers.

Education

2010-2017	**Ph.D., Machine Learning** University Badji Mokhtar of Annaba (UBMA)
2008-2010	**M.S., Information and Communication Sciences and Technologies** University Badji Mokhtar of Annaba (UBMA)
2004-2008	**B.S., Computer Science** University Badji Mokhtar of Annaba (UBMA)

US Equivalency

Bachelor's, Master's and earned doctorate degree from accredited institution.
Credential Evaluation by World Education Services, WES, NY
Ref: 3297793

Publications and Conferences

Nezzar, R., Farah, N., Khadir, T., and Chouireb, L. (June 2016). Mid-Long Term Load Forecasting using Multi-Model Artificial Neural Networks. International Journal on Electrical Engineering and Informatics. Vol. 8, N. 2. 375-389.

Nezzar, R., Farah, N., Khadir, T., and Chouireb, L. (March 2015). PREVELEC-DZ Mid and Long Term Algerian Electrical Load Forecasting Software. CAGRE Conference, Algiers, Algeria.

Nezzar, R., Farah, N., Khadir, T., and Chouireb, L. (June 2014). Toward Neural Network Optimization for Mid - Long Term Load Forecasting. International Work Conference on Time Series Analysis (ITISE), Granada, Spain.

Nezzar, R., Farah, N., Khadir, T., and Chouireb, L. (May 2013). Mid-Long Term Algerian Electric Load Forecasting using Regression Approach – IEEE. Konya, Turkey.

Nezzar, R., and Seridi, H. (November 2011). Process Creation of Mash-up: Migration of WSDL 2.0 to Maude. Conference of Extraction and Knowledge Management. Tangier, Morocco.