

## **IMAD MOULINE**

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### ***Objective***

My objective is to contribute to the research in the area of software engineering. This includes all aspect of software engineering and reengineering especially in emerging fields such as wireless technology.

### ***Education***

- Master of Science in Computer Science from Al Akhawayn University (1998-2000), major in Information Systems and minor in Artificial Intelligence GPA: 3.67/4.0.
- Licence (Bachelor) degree in Applied Mathematics, major in Numerical Analysis, Mohamed V University Rabat (1993-1997) High Honours.
- Baccalaureate in Mathematical Science (1993).

### ***Work Experience***

- **Network engineer at Orion Telecom (2002-2003)**  
Installing and configuring Servers, Routers and Hubs, Developing Intranet/Internet applications.
- **Software Engineer at OneCor/Intellia (2000-2001)**  
Search Engine Development, Distributed computing, Multithreading, Web Development and Graphical User Interface. I was involved in the following tasks: design, development, and testing.
- **Teacher Assistant, Al Akhawayn University (1999)**  
I taught an introduction to computer science lab.
- **Internship at MAP: The official press agency (1998)**  
Participating in a project related to the integration of multiple databases systems.

### ***Trainings & Certificates***

- Sun Certified Java Programmer for Platform 2 (2002).
- Training in Oracle 8i, Oracle Designer and Developer 2000 (15 Days)-Omnidata (Oracle representative).
- Training in MS SQL Server 7.0 (5 Days) –Microsoft.

## ***Projects***

### ***Professional Projects***

- *Project OneSearch*: Consists of a search engine capable of indexing full-text as well as generic extra fields. The indexed documents are in different languages, and formats. A wide range of search techniques have been implemented such as: not, and, or, phrase, time, soundex, wildcard, and stemming for some languages. The index is stored in files that are separated in two categories. The first category is meta-data about words, files, and storage structure while the second category is the index itself.
- A data warehouse for the CNCA ("Caisse National du Credit Agricole") bank to allow long term (10 years) analysis of benefits. Analysis and design in UML using Rational Rose 2002, implementation of the Dimensional Data Warehouse (DDW) using Oracle 9i, data extraction and transformation (from an Oracle 8i OLTP) and data quality check implemented using JDeveloper 9, and the query tool and GUI implemented using the Discover 9. Preparation of the data to run experiments for testing the system and running some demos: generating a random number of transactions between 500 and 1000 each day (weekends excluded) in the OLTP starting from January-1992 to December-2002.
- *Project OneDoc*: Digital library entirely based on the web technology. Users can manage different document types (Accounting, Office, Bills, Schemas, Images, Video, Sound...) easily and use an e-commerce for online catalogue. Processed documents come from different sources (Internet, Facsimile, Fax, Scanner...).
- ERP+CRM solution for IAM ("Maroc Telecom Company") covering all areas from customer management, supply chain and accounting. Designed using UML Rational Rose 2000, JDeveloper9 and Oracle9i.
- Project for legal/justice department to allow judges to look for similar cases and benefit from precedents. This software can be run from CD-ROM in different web browsers and platforms relying on communication between Java Applets and JavaScript code.
- *Project OneNews*: Consists of organizing incoming news from press agencies and make them indexed. First the news coming from news agencies (AP, Reuters, AFP, MAP...) in different languages are read from satellite digital box port then stored in a database. The news are indexed in real time and sorted to various categories. The user explores the information using OneNews Explorer which can be customized to new search filters and personal folders. Designed using UML and implemented in Java (Forte, SUN) and PHP script language.
- Network connection of the main site BULL DPS 7000 belonging to C.N.O.P.S with Casablanca branch as well as with both Mutuelle of Armed Forces and Mutuelle of Police which allows users to use PCs and software to communicate with Mainframe Server for more flexibility, avoid trainings users for mainframe terminals, and cost effectiveness.
- Installed an INTRANET/INTERNET Network for Royal Armed Forces so they will communicate internally while keeping sensitive information secure by choosing special encryption Routers and Firewalls.
- Installed and configured a Firewall for I.S.E.S.C.O.
- Designed and Installed LAN/WAN for a documentation center.

### ***Academic Projects***

- Educational tool, creation of dynamic interfaces, data storage, graphical representation, Problem solving for business, easy creation of new kind of problems. Implemented using Java technology.
- Credit loan automatic acceptance using Neural Networks and Decision trees-Business rules generation.
- Prediction of stock exchange using Fuzzy Neural Networks.
- Designed and implemented of an interactive and on-line consulting in the area of finance to help investors take financial decisions.
- Text categorization using Decision Trees.
- Data Warehouse for Al Akhawayn University - (aggregates and data extraction).
- Expert System for helping people to overcome technical computer problems.
- Programming an ADA-like Compiler.
- Implementation of the Simplex method (and some well known algorithms in mathematical programming, numerical analysis, and mathematical optimization) in Borland Pascal 7.0 and FORTRAN.
- Security project using ICMP protocol to ensure the availability of all connected computers.
- LAN and WAN installation (Configuration of routers, modems, hubs and work-stations).
- Programming Client\Servers Application using Socket Programming with C and Java Languages.

### ***Technical Skills***

- *Programming:* Java, JDBC, EJB, JSP, SERVLET, RMI, AWT/SWING, JavaScript, C, C++, Socket Programming, ADA, Pascal, FORTRAN, Lisp, Clips, PHP, XML, HTML.
- *Database:* Oracle8i, Oracle9i, Oracle Warehouse Builder 2.0, MS SQL Server 7.0 and 2000, MYSQL 3.x.x
- *Networking:* WAP/WML, TCP/IP, ATM, Frame Relay, SMTP, ICMP, IMSP, BULL DPS 7000, CYSCO Routers (1600, 2400, 3000, 3600, 4000) Zyxel Prestige 153X.
- *Operating Systems:* UNIX (Sun Solaris 8), Linux Mandrake (7.0, 7.2, 8.1), Redhat Linux (6.2, 7.1, and 7.2), Windows 95/98/2000/XP and Windows NT 4.0.
- *Artificial Intelligence:* ANFIS, Quick Propagation, NEFCLASS, Genetic Algorithm, KNN, FCM, C4.5, ID3.
- *Web Server:* Apache 1.3, IIS 4.0.
- *Application Servers:* J2EE, Resin, Tomcat, JServ1.0, JBoss.
- *Development:* UML Rational Rose 2000, JDeveloper9, Discover9, JBuilber 6.0, VisualAge for Java 4.0, Forte 3.0, MS Visual C++ 6.0, Borland C++, Oracle Developer and Designer 2000, and Dreamweaver 4.0, Fireworks 4.0, Photoshop6, GoLive 5.0.

### ***Relevant Coursework***

Software Design / Software Architecture / Software Engineering / Programming Languages and their Compilers / Advanced Design and Analysis of Algorithms / Data Warehousing / Data Mining / Database Systems / Advanced Database Systems / Data Structures / Advanced Network Design / TCP/IP / Artificial Intelligence / Fuzzy Sets and Systems / Knowledge-Based Systems.

### ***Languages & Hobbies***

- *Languages:*  
English: I did all my Master studies in English.  
French: Primary and secondary levels are partially in French while the Bachelor degree is exclusively in French.  
Arabic: My native language.
- *Hobbies:*  
Swimming, Fishing, Taekwondo, Tennis, Nature Exploration, and Traveling.