RÉSUMÉ

MAJID VALIPOUR

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SUMMARY

Full-stack software engineer with expertise in web-development, computer networking, and digital system design. I have led and been a member of successful teams and have experience working across disciplines to deliver excellent work.

Graduated with a Master of Applied Science degree in Computer Engineering from University of Toronto is a testimony to my academic excellence. I communicate effectively, have strong technical knowledge, and excellent analytical and problem solving skills. These skills and my industry experience make me an all-around outstanding software engineer. I like building innovative products, enjoy challenging work, and strive to be the best.

EDUCATION

2006–2010 University of Toronto, **M.A.Sc.** in Electrical and Computer Engineering
Thesis: Development of a platform for building overlay networks in heterogeneous environments, under supervision of *Prof. Jörg Liebeherr*.

2002–2006 Sharif University of Technology, **B.Sc.** in Computer Engineering
Thesis: Improving performance of the K-mean clustering algorithm using vector processing extensions (MMX and SSE), under supervision of *Prof. Hamid Sarbazi-azad*.

TECHNICAL SKILLS

Programming Languages and Technologies

- Expert in Java with 8+ years of experience and proficient in JavaScript, Lua, Python, C, C++, and XQuery.
- Proficient in SQL (MySQL, PostgreSQL), and NoSQL (CouchDB, MongoDB, MarkLogic) databases.
- Proficient in multi-threaded, socket programming, and event-drivent IO (NodeJS).
- Skilled in Objective-C (iOS), Shell Scripting, PHP, and MATLAB.
- Certified in mobile application development using Kony framework.

Web Development

- Expert in multi-tierd web application development with J2EE technologies, Spring, Spring MVC, Hibernate ORM, Struts, GWT, JSP, Portlet, and XSLT & XML.
- Expert in interactive web development using AJAX and JavaScript frameworks such as jQuery, Zepto, Mustache, Backbone, YUI, DOJO, Sencha, and ExtJS.
- Proficient in HTML5 and CSS3 (including responsive design and grid systems)
- Proficient in various CMS: Adobe CQ, Liferay, Joomla.

Software Engineering

- Proficient in unit testing (JUnit, TestNG, QUnit), and integration testing (Selenium, PhantomJS, CasperJS).
- Skilled with various build tools (Maven, Ant, Gradle, Make), revision control tools (Git, Subversion), continous Integration (Team City) and bug tracking tools (JIRA, bugzilla).
- Skilled at software design and modeling (UML) and various development methodologies.

Theoretical Background

- Strong theoretical background in data structures, algorithms, communication networks, and digital systems design.
- Strong background in object-oriented analysis and design, functional programming, and design patterns.

Network Design and Administration

- Proficient in networking technologies: LAN switching (Ethernet), Wireless networking (802.11), TCP/IP, IP routing (RIP, OSPF), SNMP, DNS, DHCP, SMTP, HTTP, SSH.
- Over 6 years Linux administration. Installed and configured Linux on servers for web-server, database server, file server, and MTA.
- Experienced in design and implementation of large-scale networks, and practical experience with various Cisco switches and routers.

Digital Systems Design

- Proficient in languages: Verilog, VHDL, and tools: Modelsim, Leonardo, Quartus II.
- Skilled in x86, m68k, and Nios-II soft processor assembly and various FPGAs and microcontrollers.

WORK EXPERIENCE

Technology Lead, Critical Mass   **June 2013 − Present**

Led a team of developers specialized in mobile projects for Critical Mass largest client, Nissan North America. I took charge during a stressful transitional period and ensured a high quality of work is maintained. Our work was consistently praised by our clients and leadership team and has been recognized by awarded first rank in 2013 J.D. Power Automotive Mobile Site review.

I oversaw all development work, and established best practices and guidelines for development, QA, and deployment practice by collaborating with related teams (QA, Release Engineering, Project Management). As the technology expert, I worked with third-party platform partner, client IT department, and hosting service provider to successfully execute weekly releases, resolve complex technical issues, and plan migrations and platform upgrades.

- Worked with project management and account teams and client stakeholders across multiple global offices to prioritize projects, plan and track their budget, and identify and train resources to deliver in time.
- Provided technical expertise to business analysts and project management team for requirement gathering, scoping and level of effort estimations.
- Closely worked with marketing science, design, and planning teams to identify areas of optimizations and innovations and to formulate our point of views on various projects.

- Conducted technical research on different technologies to help shape the strategic direction on mobile platform for client. Wrote technical analysis and point of view documents and presentations to clarify business objectives and values to clients and other stakeholders.
- Prototyped a new automated integration testing suite based on phantomjs and worked with account team to justify and secure the budget leading to its implementation across multiple brands.
- Advocated and led an extensive speed optimization project which lead to 30%-40% improved response time in key pages within existing framework.
- Maintained a custom user tracking implementation that integrated with third party platforms (Adobe Omniture, Doubleclick) to ensure accuracy and correctness. This system was critical in providing valuable insight in mobile user behaviour and KPI measurements.

Senior Software Developer, Critical Mass   **June 2012 – March 2013**

- Became a certified expert in a proprietary mobile development framework, Kony, under a very tight timeline.
- Developed new features for Nissan North America mobile web applications working with team lead and project managers to deliver project in time and within budget.
- Reviewed existing codebase and provided an extensive optimization lists to improve code performance, correctness, and code quality and maintainability.
- Wrote technical documentation, coding and best practice guidelines, and training materials for mobile web development.
- Worked with other developers to automate build process and create various utilities to compensate platform shortcomings which considerably streamlined development and deploy processes.

Software Developer, Scholars Portal, Ontario Council of University Libraries   **July 2010 – June 2012**

- Prototyped an iPhone chat client app for Ask-a-Librarian project.
- Designed and implemented geospatial search API using XQuery and Marklogic.
- Designed and implemented personalized accounts for geoportal application. I simplified the application by using JSON as both storage and transfer formats. The application uses Backbone MVC in front-end and CouchDB storage in back-end.
- Designed and developed a single sign-on system used by multiple applications. The system provided a single unified user management system while transparently supporting two different types of external identity providers: OpenID (Google, Facebook) and Shibboleth (a federated identity system popular in academic institutions)
- Developed automated integration tests using Selenium, and unit tests using QUnit.
- Maintained and extended an in-house Javascript based ebook reader adding features such as text highlighting, bookmarking, and note taking. Prototyped a mobile version of the reader using Zepto, and JQuery.
- Developed an in-house logging and analytics system. As part of this project I implemented a prototype which used CouchDB for log storage and indexing and D3 for web-based data visualizations.
- Implemented user accounts for the ebook project. An interesting feature was the integration with RefWorks citation management API using Spring REST template.

- Developed a message-passing system using ActiveMQ to decouple and decentralize ebook ingestion processes.
- Maintained and extended a rich web application for staff to manage entitlements across various portals using ExtJS UI technology.

Research and Lab Assistant, Network Research Lab,   **September 2006– May 2010**
University of Toronto

- Designed and evaluated mechanisms and protocols that enable large-scale overlay networks to operate in heterogeneous environments. (part of the Hypercast project)
- Built a mid-size *Emulab* testbed for network research at University of Toronto. The testbed can allocate nodes in arbitrary combinations, and link them with nearly arbitrary topologies using VLAN technology.
- Built a lab using Cisco equipments to teach networking in the undergraduate program.
- Administrated the internal network of the lab. I was in charge of setup and maintenance of a NFS/NIS system with Mac and Linux workstations, a firewall, an hourly backup system, and the group website and wiki.
- Supervised and helped students in the lab for courses such as Computer Networks I, Internetworking, Computer Hardware, and Digital and Computer Systems.

Software Developer, Advanced Information and Communication Technol-   **2005 − 2006**
ogy Center

- Developed a web-based educational system for a nationwide university using J2EE technologies.
- Designed and developed a fast and reliable course registration subsystem.
- Participated in writing functional specifications and design documents.
- Migrated academic records of more than 100000 students from the legacy FoxPro application into the new system.
- Set up and configured secure web and email servers.

Programmer, Sharif Artificial Intelligence and Robotics Laboratory   **2003 − 2005**

- Designed and developed advanced artificial intelligent algorithms in C++ for autonomous rescue agents.
- Designed and implemented novel efficient algorithms using dynamic programming.
- Participated in writing technical documents to be presented to the league committee.
- Set up the development environment for the team.
- Result: our team, *Impossibles*, won the **championship** of the rescue simulation league in the International RoboCup 2005, Osaka, Japan.

Honors and Awards

- Received *Edward S. Rogers Sr.* Graduate scholarship (2007).
- Received the *Outstanding Student* award from university president (2005).
- Ranked 1st among hardware engineering students of class 2006.
- Champion of the rescue simulation league in the International RoboCup 2005.

SELECTED PUBLICATIONS

- Dissemination of Address Bindings in Multi-substrate Overlay Networks, *Jörg Liebeherr and Majid Valipour*, Proc. of 23rd International Teletraffic Congress (ITC 23), December 2010.

- Cross-substrate Advertisement: Building Overlay Networks for Heterogeneous Environments, *Majid Valipour*, University of Toronto, July 2010.

- Impossibles Sony AIBO 4-Legged RoboCup Technical Report, *Saman Aliari Zonouz, Hamid Reza Vaezi Joze, Siavash Rahbar, Majid Valipour, Alireza Fathi*, RoboCup 2006, Bremen, 2006.

- Impossibles 2006 Rescue Simulation Team Description Paper, *Jafar Habibi, Mohammad Reza Ghodsi, Hamid Reza Vaezi, Majid Valipour, Saman Aliari, Nima Hazar*, RoboCup 2006, Beremen, 2006.