

Milson Munakami

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CAREER OBJECTIVE

To work in an environment that challenges my abilities and encourages teamwork while supporting individual development and creativity; I also hope to gain valuable experience and make a significant contribution using my technical skillset, which provides opportunities for professional growth and increasing responsibility.

EXPERIENCE SUMMARY

I am a highly experienced, passionate, driven and technically proficient critical thinker and problem solver. I have over 8 years of professional experience in Full-Stack software development using Python, Java, C#, PHP and other open source development tools and techniques. I graduated with a Master's Degree in Computer Science with GPA of 3.78/4.00 with a focus on Cyber Security. Over four years of proven technical leadership demonstrates my ability to work in a distributed team of developers and motivate junior staff to achieve a common organizational goal. My experience also demonstrates the ability to lead, collaborate and prioritize tasks to accomplish results, complete projects in a timely manner, and tackle new challenges by handling and completing various time-critical projects. I have proven experience in product development lifecycle, including the detailed planning, requirements analysis, design, implementation, integration, production support, and continuous enhancement of applications.

EXPERIENCE DETAILS

- Ability to read and understand detailed technical specifications and translate them into project requirements.
- Experience using UML diagrams like process/data flow diagrams, use case diagrams, class diagrams, and state diagrams, etc.
- Experience and passion for working in a highly collaborative and fast-paced Agile software development environment.
- Knowledge of software configuration management/version source control systems, preferably GIT, SVN, Github, GitLab, etc.
- Familiar with a wide range of IDEs for development such as IntelliJ, Eclipse, Visual Studio, VIM, R-Studio, VSCode, etc.
- Expertise in front-end application development in multiple domains using various web programming languages like Java, Python, C#, PHP, etc.
- Knowledge of a variety of modern front-end technologies such as HTML5, CSS3, JavaScript, NodeJS, Angular JS, JQuery, AJAX, etc.
- Solution architecture expertise with high-performance MVC frameworks and client-side scripting languages.
- Extensively familiar with creating, logging, monitoring, debugging, and load testing RESTful APIs and protocols like SOAP, REST, JAX-WS, JAX-RS, WCF and RESTful Web Services.
- Extensive experience in software quality assurance, automated code review using Test Driven Development (TDD) (e.g. junit, NUnit, etc.) and code coverage testing.
- Proficient with benchmarking, evaluating, measuring performance metrics and tuning of application.

- Extensive experience in optimized conceptual, logical and physical data modeling with data modeling tools (e.g. TOAD) and database design in complex, large-scale data environments.
- Expertise in RDBMS such as Oracle, MySQL, MSSQL, PostgreSQL, etc.
- Expertise with NoSQL databases such as MongoDB, CouchDB, and Cassandra.
- Good Knowledge about application design for high performance, scalability, and reliability.
- Extensive understanding of Machine Learning and Data Mining Concepts.
- Experience working with and developing scientific models, especially in the areas of big data, data analysis, data processing, and 3D data visualization.
- Experience working in multidisciplinary research areas including computer science, medical science, and material sciences domains.
- Knowledge of development using Big Data Analysis Tools and Technologies such as R, Matlab, Python, Spark, and Hadoop, etc.
- Experience with multi-threading, collections, performance tuning and concurrency handling in distributed systems in HPC environment.
- Knowledge in advanced scientific computing, distributed/parallel/grid/cloud computing, code optimization, scientific workflow language such as Fortran, C, C++ and utilizing programming models such as MPI, GPUs, CUDA and OpenMP in Linux environment.
- Expertise in security concepts in hardware and web applications and their application to mitigating multifarious security threats.
- Expertise knowledge of architecting and building security capabilities including Identity and Access Management, Active Directory / LDAP integration and administration, multi-factor Authentication and Authorization, Shibboleth, Open Authorization (OAuth2), Single Sign-on (SSO), and Federated Identity Management capabilities.

TECHNICAL SKILLS

Programming Languages: C, C++, C#, ASP.NET, Java, PHP, Rails, Fortran, R, Python, Matlab, PL/SQL, NoSQL.

Parallel programming Tools: MPI, OpenMP, OpenCL, CUDA, GPU, Distributed Systems, Cloud Computing

Libraries: Vagrant, Puppet, Redis, HAProxy, Nginx, Tomcat, Servlet API, MVC, RESTful Web Service, JAX-RS, JAX-WS, SOAP, REST, WSDL, WCF, Apache SOLR, Apache Lucene, Maven, JUnit, NUnit, Socket programming.

Version Source Control: GIT, SVN, Github, GitLab.

Databases/Big Data Frameworks: Oracle, Hadoop, Spark (PySpark), MongoDB, Cassandra, Elastic Search, MySQL, MSSQL, PostgreSQL, MapReduce, Data Modeling, Entity Framework, Hibernate

IDE Tools: Eclipse, NetBeans, IntelliJ, Globus CLI, Anaconda IPython Notebook, PyCharm, R-Studio, VSCode, Visual Studio, Bracket, Atom, VIM.

Operating Systems: Windows, UNIX (Solaris), Mac OS X, Virtualization, Docker, OpenStack

Software Development Models: Waterfall, Agile, Scrum.

Web Frameworks: HTML5, XML, JSON, CSS3, JSP, PHP, C#, JavaScript, NodeJS, AngularJS, ExpressJS, D3.js, three.js, jQuery, AJAX, Web CMS (Drupal, Wordpress, Joomla, SageFrame, DotNetNuke, etc.).

Cybersecurity: SDN Security, Web Security, Cloud Security, Network Security, Network Access Control, Firewall, XACML, SAML, OAuth2, SSO, LDAP, Shibboleth

Data Libraries: Numpy, Pandas, Sci-py, Scikit-Learn, matplotlib, ggplot2, networkx.

ETL and BI Tools: Microsoft Power BI, Tableau.

Machine Learning/Statistical Concepts: Deep learning, Supervised learning, unsupervised learning (Clustering, Neural Networks), information retrieval, recommendation systems, statistical analysis, data/web mining, text mining/sentiment analysis, hypothesis testing.

WORK EXPERIENCE

Scientific Application Developer, Research Computing Center (RCC), The University of Chicago (Nov. 2016 – Present)

- Architect, design, develop and implement highly flexible, scalable, low latency, highly available, and cost-effective distributed applications based on modern web technologies.
- Develop interactive interfaces that enable users to visualize, validate and submit data, and provide complex computational processing (HPC), interfacing with external databases and storage.
- Involved in product development, project management, weekly meetings, code review, performance tuning, technical documentations using SDLC process and Agile methodologies.

Ambassador, OpenDaylight Project, The Linux Foundation (Aug. 2014 – Present)

- A recognition that is given by The Linux Foundation for my expertise, leadership, and willingness to share my knowledge for the betterment and growth of the open sourced community to help accelerate adoption of Software-Defined Network (SDN) and Network Function Virtualization (NFV).

Graduate Research Assistant, Boise State University (Aug. 2014 – Nov. 2016)

- Designed and setup SDN lab at BSU to benchmark, test and validate research in SDN and NFV.
- Researched on SDN security, mobility, information, and software security such as delegation of authority, separation of duties, and obligation handling in a secure software design model.
- Mentored as a graduate mentor for CS REUs (Research Experiences for Undergraduates) in cyber security, which was a nine-week summer program on BSU campus during Summer of 2015 and 2016, sponsored by the National Science Foundation (NSF).

Team Lead, BrainDigit IT solution Pvt. Ltd. (Jan. 2010 – Jul. 2013)

- Worked with an enthusiastic team of eight to build and ship a powerful and flexible open sourced eCommerce Web framework, AspCommerce, on top of Microsoft's ASP.NET technologies.
- Developed community-driven Content Management System (CMS) branded as SageFrame which was voted as one of the best budget CMS for 2012 and was also awarded as Winner of the 2014 People's Choice CMS Award for Best Open Source .NET CMS by CMS Critic.
- Promoted from Senior Developer to Team Lead, which involved increased responsibilities.
- Able to get certified the company as one of the Red Herring Top 100 IT Companies in Asia for its quality of services, the finest development practice and customer-centric products.

Mid-Level Software Developer, ByProxy Nepal Dot Com Pvt. Ltd. (Apr. 2009 – Jan. 2010)

- Developed a Windows mobile application that allows placing an order in restaurants through SMS, and automatically scheduling and printing the orders on real-time.
- Contributed on scalable and modular GUI and Database design for an interactive web portal.

PROJECTS

DataHub:

- Designed and developed the DataHub Framework that provides a portal for the scientific community to access the back-end NoSQL database, tools, and workflows of published scientific work, enabling reproducibility and validation of published scientific results.
[**Technologies:** JAVA, Globus CLI, iPython Notebook, HTML5, CSS3, jQuery, D3.js, Python, MongoDB]

Sign and Gesture Archive (SAGA):

- Built the SAGA web portal, which is a video data library for the gesture, sign, and spoken language data. It includes large video files, coding files, annotations and related metadata that are indexed within a relational database to support searchability based on user and file level permissions.
[**Technologies:** PHP, CMS, LDAP, Shibboleth, HTML5, CSS3, jQuery, MySQL]

X-ray Reconstruction of Moving Morphology (XROMM):

- Supported the build of a web environment (XMAPortal) for curating XROMM data to enable viewing of X-ray motion video data and browsing of scientific metadata. (XROMM is a 3D imaging technology for visualizing and quantifying rapid skeletal movement, e.g. bird flight, human movement, etc.).
[**Technologies:** PHP, LDAP, Shibboleth, HTML, CSS, jQuery, MySQL, Globus CLI, 3D data visualization]

Daemo: a Self-Governed Crowdsourcing Marketplace from Stanford HCI Group Crowd Research:

- Crowd Research is part of the larger Aspiring Researchers Challenge which is an experimental initiative by professor and students at **Stanford University** to recognize the potential of upcoming student researchers and exploring the possibility of massive research collaboration between the two.
- Actively contributed for a complete design, implementation, launch, and evaluation of a new crowdsourcing platform - key aspects include an open-governance model and prototype tasks.
[**Technologies:** Python, Django, AngularJS, PostgreSQL, REST framework, Secure Payment Options]

Virtual Whiteboard:

- Built an online interactive Whiteboard collaborating tool with a real-time virtual room, text-chat, and screen sharing.
- Utilized a scripting language server (Node) to scale to a cloud-based architecture and support mass user requests via load balancer and optimization tools.
[**Technologies:** NodeJS, ExpressJS, HTML5, Socket.IO, Redis, Vagrant, MySQL, Nginx, AWS Cloud]

Restaurant Recommendation System and sentiment analysis:

- Designed and developed a restaurant recommendation system on top of Yelp dataset.
- Suggested items to users through collaborative/content filtering based on historical user data.
- Performed sentiment analysis of published reviews by using classification algorithms (i.e. support vector machines, Naive Bayes, and combinations of Word2vec and Bag of Words).
[**Technologies:** R, JAVA, Python, Machine Learning, D3.js]

EDUCATIONAL QUALIFICATIONS

Boise State University, Boise, ID (Aug. 2014 – Dec. 2016)
Masters in Computer Science (M.Sc.)

• **GPA:** 3.78/4.00

Khwopa Engineering College, Bhaktapur, Nepal (2004 – 2008)
Bachelor of Computer Engineering (B.E.)

CERTIFICATES

- **Machine Learning** by Stanford University on Coursera. Certificate (July 2016)
- **Computer Networks** by University of Washington (April 2014)
- Microsoft Certified Professional (**MCP**), Microsoft (Jan. 2013)
- Microsoft Specialist - Programming in HTML5 with Javascript and CSS3, Microsoft (Jan. 2013)
- Microsoft Certified Professional Developer (**MCPD**), Microsoft (Dec. 2009)
- Microsoft Certified Technology Specialist (**MCTS**), Microsoft (Jun. 2009)

AWARDS and ACHIEVEMENTS

- Outstanding Leadership Award (Nov. 2011, Jan. and Jul. 2012), BrainDigit IT
- Employee of Month (Nov. 2011), BrainDigit IT

PUBLICATIONS

[1] Munakami, Milson, "**Developing an ABAC-Based Grant Proposal Workflow Management System**" (2016). Boise State University Theses and Dissertations. 1218.

[2] I. Alsmadi, M. Munakami and D. Xu, "**Model-Based Testing of SDN Firewalls: A Case Study**," 2015 Second International Conference on Trustworthy Systems and Their Applications, Hualien, 2015, pp. 81-88.