Dakota **Leonard**

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Career Objective

To obtain a job as a software/firmware developer in an environment where I am challenged every day, will be able to apply my technical skills, and will need to learn new concepts on a regular basis.

Education

BS in Computer Science w/ Concentration in Software, Web,
And Computer Security
Minor in Mathematics
Overall GPA 3.58
Major GPA 3.86
Expected Graduation: May 2016

Job Experience

IT Intern – Technology Enabled Solutions | Caterpillar Inc.
(Sept 2015 – Dec 2015)
Worked on innovation products in Caterpillar employing cutting edge technologies. Developed web API's in Azure for real time data processing and analytics. Used both C# and Java to develop these technologies with Eclipse and Visual Studio.

IT Intern – BPM & SOA Services | Caterpillar Inc.
(May 2015 – Aug 2015)
Worked in the Business Process Design and Service Oriented Architecture areas. Developed a test business process for providing quotes on parts using IBM BPM process designer. Gathered requirements for, developed, tested, and optimized a custom java logging plugin for WebSphere to be used by SOA developers.

Consultant – Tutor | Bradley University CLA (Oct 2013 – Current)
Helped students understand and be able to apply content for various computer science courses.

System Engineering Intern | Central Illinois Radiological Associates
(May 2014 – May 2015)
Provided technical support to radiologists, implemented automation solutions on servers, provided system administration for virtual and physical environments, and designed a web based solution for tracking employee hours, vacation time, and tracking IT assets utilizing JQuery, MySQL, and PHP.

IT Intern | United Facilities Inc. (Oct 2013 – Aug 2014)
Designed and implemented various systems including a content management system for HR. Worked with management to help them understand the technical differences between various offers from web hosting companies.

Leadership Experience

President of Bradley's Video Game Design Club (2014 – 2016)

- Former Vice President (2013 – 2014)

Computer Science Department Representative for Bradley's LAS Student Advisory Board
(2015 – 2016)

Board Member for Bradley CS Department Student Advisory Board (2014 – 2016)

Public Relations Officer for Bradley chapter of ACM (2014-2015)

Former **Senior Patrol Leader** and **Patrol Leader** for Boy Scout Troop # 150

Skills

Core Skills:

Algorithms	●●●●
Cryptography	●●●●
Databases (Design)	●●●●
Databases (SQL)	●●●●●
Data Structures	●●●●●
Graph Theory	●●●
Networking	●●●●
Security	●●●●
Software Engineering	●●●●

General Programming:

C++	●●●●●
C#	●●●●
Java	●●●●●
Python	●●●●
Visual Basic	●●●●

Web Development:

CSS3	●●●
JavaScript	●●●●
JQuery	●●●
HTML5	●●●●●
PHP	●●●●●

Electronics:

Arduino	●●●
ARM Assembly	●●
AVR Microcontrollers	●●●
Circuit Design	●●
Firmware Programming	●●

Operating Systems:

Android	●●
Linux (Debian & Ubuntu)	●●●●
OS X	●●●●●
Windows (XP, 7, 8)	●●●●●●

Applications:

AVR Studio	●
Blender	●●●
Eclipse	●●●●●
IBM BPM Designer	●●●●
MS Office	●●●●
Unity 3D	●●●●
Visual Studio	●●●●
VMware VSphere	●●●
WebSphere	●●

References Available Upon Request

Portfolio

Electronics

Experiment in my free time with electronics projects using microcontrollers and integrated circuits. Built simple games like pong and simon using ATmegas and ATtinys written in mainly C/C++. Also used my electronics skills to fix broken electronics. From this I have learned how to write a program using minimal code, attained a better understanding of computer architecture, and learned better how to target my debugging to certain parts of code, or a certain part of a circuit.

File-based Logging System for WebSphere ESB Bus

Gathered requirements for, designed, developed, tested, and deployed a java based implementation of a custom file based logging system for WebSphere. This was to be used by SOA developers for ESB development. This implementation had to be lightning fast. I attained this by focusing heavily on optimization after an initial implementation was complete, and then by making it asynchronous. It spawn threads up to a configured limit to handle logging. From this I learned optimization and handling of asynchronous file access.

Game Development

Developed multiple games using a variety of technologies (Java, LibGDX, Slick2D, Unity 3D, XNA) in class, as part of Video Game Design Club, and in 24 hour game jams. I played 2 main roles in game development. That of a team lead, and that as a software developer. Game programming is what taught me how to code, taught me the importance of object oriented programming, and introduced me to asynchronous programming.

Hour Tracking Web Application

Gathered requirements for, designed, implemented, tested, and deployed web app for tracking hours worked by employees and tracking their personal time off. Also it created a calendar on the home page based on time off. The app was configurable by designated admins who themselves could add new admins. The applications backend was PHP and MySQL and the frontend was HTML5, CSS3, JavaScript, jQuery, and Bootstrap. I learned a lot of my application design skills and web programming skills from this project.

National Fire Incident Reporting Database Project

Lead a project team analyzing the National Fire Incident Reporting (NFIR) database. We were given the data in CSV files, converted the date and number data to a format readable by MySQL, designed a schema for the data, inserted the data into the MySQL database, and analyzed it for data quality issues such as null values, values exceeding given ranges, etc. We created a report based upon this analysis and it was sent to Underwriter's Laboratory (UL) who commissioned the project. I attained a much greater knowledge of project management from this and learned that a leader needs to utilize their team to the fullest to avoid overworking themselves.

Robotics Research

Worked on a research project at Bradley University under Dr. Matthew Tennyson and Dr. Deitra Kuester. The project focused on the use of robotics to help treat children with autism. My jobs included designing, building, programming, and testing the robots. (Spring Semester 2015)

Simplified DES Implementation

Developed C++ program implementing the simple DES encryption algorithm. Stored data in integer type variables (char, short, int) and manipulated its bits using bit-wise operations. Learned a lot about the application of discrete mathematical algorithms to coding and how best to store data in C++.

Upgraded Content Management System

Upgraded a HR content management system from .net 2.0 to .net 4.0. This required rewriting Visual Basic code and re-creating the UI. From this I learned everything I know about upgrading legacy systems and migrating data.