IRTEZA ARIF

4B ELECTRICAL EGINEERING

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SKILLS

- **Software Engineering:**
Applicable knowledge of programming languages such as C#, Java, C++, Objective C, embedded C, Visual Basic, MATLAB, PHP, Python and a strong understanding of the fundamentals of object-oriented programming as well as algorithms and data structures.

- **Front-end Development:**
Experience in development of User Interfaces using JavaScript, CSS3, HTML5, AngularJS modern libraries such as JQuery and a solid understanding of web development concepts such as DHTML, AJAX.

- **Back-end Development and Testing:**
Experience coding on the server-side using PHP and Python. Some exposure to a variety of J2EE application servers including JBOSS, Tomcat and IBM WebSphere. Knowledge of server-side technologies such as ColdFusion, JSP, JavaServer Faces and relational databases. Experience writing unit tests using JUNIT, Selenium etc. Experience in mobile applications performance and usability testing.

- **Development Environments:**
Comfortable with Microsoft Visual Studio, Eclipse, NetBeans and Adobe Dreamweaver. Experience using UI development tools such as JQuery UI and Kendo UI.

- **Application and Design Software:**
Experience working with Lotus Notes, Multisim. Applicable skills in AutoCAD and DraftSight. Graphic Design experience working with Vector and Raster graphics (Adobe Illustrator and Photoshop).

- **Hardware Knowledge and experience:**
Experience working with hardware systems and lab equipment such as FPGA's, Microcontrollers (Arduino), Oscilloscopes, Multimeters. Surface mount soldering experience on printed circuit boards. Good foundation in sensor technology and required signal conditioning circuitry and mathematics. Experience with network protocols - HTTP, HTTPS, and TCP-IP. Experience with hardware description language (VHDL), Altera Quartus Software and a sound understanding of digital hardware.

EXPERIENCE

Bazaarvoice

Automation Developer
September - December 2015

- Designed test modules for all layers of core web services (Unit Tests, Integration Tests and System Level Tests)
- Wrote orchestration code and set up test environments locally and on the cloud (Jenkins and Amazon Web Services)
- Automated integration of mock test data and created SDKs to efficiently add and remove test data while writing tests.
- Wrote UI code for test result analytics and algorithms to identify core processes that required extensive testing.
- Wrote UI and load tests for core applications.

Validus Group

Application Developer
September - December 2014

- Created a custom, single-page, responsive web application using AngularJS to replace a legacy line-of-business web application.
- Worked with a team of developers to upgrade an existing ASP.NET business web application for a critical 2014 release.
- Created new and updated existing ASP.NET template-based server controls that were used in various places throughout the application.
- Updated the data access layer when needed. Created and modified SQL DDL scripts.

Canadian Medical Protective Association Web Developer Jan – April 2014	- Added significant usability enhancements to legacy pages using dynamic HTML and the jQuery JavaScript framework. - UI enhancements included drag-n-drop DOM elements, tree views, specialize etc. - Created HTML content for posting on CMPA's member portal, employee portal and public web site. - Developed Web applications for internal CMPA users. - Wrote unit tests and performed extensive debugging on existing and new code. - Performed large scale code reviews and restructures.
eHealth Ontario Java Developer May- August 2013	- Involved in architecting various Business Layer and Data Management components of this multi-tiered web based system over J2EE architecture. - Enhanced and supported core business web applications for programs. - Wrote and modified UI components using JQuery and Kendo UI. - Provided web UI expertise to design sessions, documented technical designs and supported QA and performance testing. - Debugging and fixing JavaScript and CSS issues. - Developed and maintained SharePoint site for the Portal Services team and provided user support to the business team.

EDUCATION

2011 - 2016 **University of Waterloo:**
Candidate for BASc. In Honors Electrical Engineering (Co-op)

RELEVANT PROJECTS

WAV Music Player– University of Waterloo (Winter 2015)
- Interfaced and SD Card and an audio CODEC to a NIOS II processor using SD bus for the SD Card and I²C bus for the audio CODEC
- Designed and implemented both hardware and software required to implement a WAV file player

Lego NXT Robot Project – University of Waterloo (Spring 2012)
- Programmed a Lego NXT robot using C# to go through complex mazes

IEEE Robotics Workshop – University of Waterloo (Winter 2013)
- Worked in a team of three to build a robot which is able to go through a maze
- Used Freeduino microcontrollers, LEDs, Infrared sensors, motors, capacitors, resistors to established the circuitry using a breadboard
- Programmed the robot using embedded C

Guitar Effects Pedal Design – Personal Project (Fall 2013)
- Soldered electrical components on printed circuit boards and monitored changes in output effect of a Fuzz pedal.
- Conducted research on the components required for different effects combined with knowledge from courses to read and implement circuit design layouts.

FPGA Programming – University of Waterloo (Spring 2012)
- Designed a traffic light system by programming an FPGA board using VHDL.

yHack – Yale University (Winter 2012)
- Collaborated in a team of 3 to design and program an android application.
- Designed, implemented and tested user interface using Android SDK and jQuery Mobile

RELEVANT COURSES

4ᵗʰ Year

ECE 473 - Radio Frequency and Microwave Circuit
ECE 457A - Cooperative and Adaptive Algorithms
ECE 445 – Integrated Digital Electronics
ECE 444 – Integrated Analog Electronics
ECE 406 – Algorithm Design and Analysis

3ʳᵈ Year

ECE 380 - Analog Control System
ECE 361 – Power Systems and Components
ECE 318 – Communication Systems

2ⁿᵈ Year

ECE 250 – Algorithms and Data Structures
ECE 242 –Advanced Electronic Circuits
ECE 224 – Embedded Microprocessor Systems
ECE 222 – Digital Computers

VOLUNTEERING EXPERIENCE

UW Bengali Students Association

VP Finance
Jan – April 2013

- Co-Organized cultural and recreational events on and off campus and maintained social networking between all members
- Acted as club representative, networked with and encouraged many students to participate in events or join as an executive member.
- Organized a three-day annual soccer fundraiser tournament and contributed towards setting up a health camp at Bottomley Home, Farmgate, Dhaka, Bangladesh.

ACTIVITIES AND INTERESTS

Intramural Soccer Referee – **University of Waterloo**
- Refereed 11-a-side, 7-a-side and Futsal games for the University Campus Recreation organization

Intramurals Soccer – **University of Waterloo**
- Consistently participated in 11-a-side, 7-a-side and Futsal Intramurals throughout university career

Music Club – **University of Waterloo**
- Member of the music club since 2012. A guitarist for about 7 years and have performed in talent shows, coffee nights and concerts on several occasions during this time.

Photography and painting – **Personal hobby**
- Photography experience with interest in image capture, algorithms of contrast resolution and image processing. More than five years of experience in painting.