Zeeshan Shahid

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EDUCATION

Bachelor of Engineering, Mechatronics Engineering Sept 2010 – June 2014
McMaster University, Hamilton, ON

Relevant Coursework: Embedded Systems Design I and II - Operating Systems - Real-time Systems and Control Applications - Mechatronics Systems – Robotics - Software Development - Operations Research - Circuits and Power Analysis – Electronics and Instrumentation – Product Development - Acquisition and Analysis of Data

EXPERIENCE

Project Engineer Dec 2015 – Mar 2016
Evertz Microsystems Ltd, Burlington, ON

- Assisted with installation and configuration of Broadcast Media solutions
- Attended sprint meetings every fortnight in line with SCRUM Agile principles to plan goals and review previous sprints (organised via JIRA)
- Learnt about the broadcast industry, broadcast media, and file-based solution systems (MAMS)
- Developed and applied software skills in UNIX systems, scripting languages (JS, Python, XSLT), and gained some familiarisation with databases, as well as knowledge on networking
    - Gained some experience with: mySQL, jboss, MediaInfo etc
- Developed and applied hardware skills to some extent: set up servers (RAM installation, hardware troubleshooting, connected it to the network); configured server boxes with custom software.
- Limited experience with Vagrant/Subversion in setting up a VirtualBox environment

Lead Project Engineer/Embedded Systems Engineer Oct 2014 – Aug 2015
Alight (Start-up), Toronto, ON

- Drew from Agile development principles to direct the development process
- Obtained business requirements and drafted project charter, Statement of Work, responsibility matrix and communication plans
- Finalised technical documentation, requirement specifications and drafted use-cases
- Kept hardware and software engineers updated on project progress and development stages through up-to-date documentation and regular meetings; created video demonstrations and presented to academic and private advisers.
- Designed, implemented and tested the software for the AVR microcontroller on the Arduino platform — GPS synchronisation and storage of GPS data, sleep cycles for power conservation, interrupt-driven, separate modes of operation depending on user preference, UART/serial communication
- Designed, implemented and tested electrical schematic of product; carried out rapid-iterative tests on software functionality on a breadboard prototype implementation
- Worked with hardware engineer to generate a working PCB design from schematic, gave feedback on design and PCB implementation.

Junior Software Developer (contracted) Aug 2014 – Sept 2014
O3KG (Start-up), Brampton, ON

- Helped to extend C# toolset to work with existing project in the Unity engine (v 4.3)
- Involved graphics level programming (manipulation of vertices, triangles, normals), ray cast system, and collision detection.

PROJECTS

Mechatronics Capstone Project (Intelligent Home Automation System)

- Designed and implemented the server-side system with the LAMP stack, using SQL, PHP, HTML and Python to manage the database, networking, synchronisation, updates, communication, and website design.
- Done on a Raspberry Pi – extensive synching was achieved through event-based messaging with the client system, and communication with the other components through pySerial and XBee modules.

Artificial Intelligence System Project

- Planned, designed and implemented various AI protocols ('collision avoidance', 'path following', 'follow the leader') in C++; simulated virtual robots in a virtual environment using the Player Stage framework — some exposure to the Agile development process, and documentation**.**

Product Development Project (HelioHeater)

- Worked alongside mechanical engineers, implemented code in Arduino's flavour of C++ to control and troubleshoot any problems with the heliostat, especially in communication between the hardware and software.

Ubisoft Academia Game Competition (*worked on The Dungeon Crew***)**
Toronto Game Jam 10 and various other game jams

TECHNICAL SKILLS

Programming /Embedded: *C#, C++ (academic familiarity with C), Python; familiar with JavaScript and some MatlabScript, recently exploring HTML5 and CSS as well (XAMPP stack) experience with Arduino, Raspberry Pi, AVR, serial (RS-232, TTL, Xbee), USB/UART, GPS.*

Applications: *LabView, Microsoft Office, JIRA, Blender, Unity, version control (GitHub, SourceTree/BitBucket), Unix environment, some Bash script*

Operating Systems: *Windows, Linux (Ubuntu, Fedora) and familiar with Mac OSX*

OTHER SKILLS AND ACTIVITIES

Writers Anonymous McMaster 2012 – 2014
McMaster Chess Club 2012 – 2013
Bahrain Mock UN Delegate (Leadership Programme) 2008 – 2009

Languages: Urdu (native fluency), English (native fluency), French (limited proficiency)

Interests: Literature, art and graphics, video games and game design, music, squash