HIMANSHU GARG

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Skills

Software

- Proficient in Python, C, C++, HTML, CSS, JavaScript, VHDL
- Extensive knowledge of Windows/Linux operating system
- Advanced user of Microsoft Word/Excel/Outlook/PowerPoint
- Familiar with Data Structures and Object Oriented development
- Developing iOS native apps using Xcode

Hardware

- Working understanding of oscilloscopes, function generators, spectrum analyzers
- Experienced in firmware development on ARM based micro processors
- Experienced in assembling desktop computers
- Knowledge of PC peripheral interfacing and devices
- Experience with electric circuits, resistors, op-amps, diodes and soldering

Technical Work Experience

IT Technician, Simon Fraser University **Sep 2015 - Present**

- Providing front desk support in the IT office regarding problems with wireless connectivity, printer issues and also resolving tickets submitted by students, staff and professors
- Resolving technical problems though phone with strong verbal skills

Systems Administrator, SAP Canada **Jan - Aug 2015**

- Provisioned and deployed Linux and Windows virtual systems on vSphere 6.0 as per customer requests and also troubleshooting those systems to keep them up and running
- Wrote scripts in Bash, Perl to automate common tasks and cleanup of the storage systems and managed the scripts through Github
- Managed the datacenter, involves inventory check, ensured the servers were running in healthy condition which improved efficiency of the datacenter

Project Experience

Projects, Self-Directed **Sep 2015 - Present**

- Developed a Tribute page and a personal portfolio page using HTML/CSS combined with BootStrap and also worked on a Telephone directory and a Virtual Cash Register project in Javascript
- Working with Raspberry-Pi to integrate Amazon's Alexa personal voice assistant and developed a script which goes to the website and orders a pizza, executed through a specific voice command

AM and FM Modulation, Simon Fraser University **Jan - Apr 2016**

- Studied AM and FM Modulation and Demodulation using RF filter, function generators and compared the theoretical and experimented values and documented the results in form of a formal lab report
- Learnt to operate different lab equipment such as Direct FM Multiplex Generator (Model 9413) and TEK-2712 Spectrum Analyzer, TDS 1012 oscilloscope

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Project Experience (Continued)

Designing a DMA-based BUS system, Digital System Design, SFU **Jan - Apr 2016**

- Worked with 2 other students in development of a VHDL based DMA BUS system consisting of IDECODE, ALU, DMA, DMEM, IMEM, RFILE components
- Synthesized and compiled it on the Terasic DE2-115 board using Quartus and displayed our results on the 7 segment HEX display using Switches as inputs
- Designed an Audio monitoring system which samples audio in and controls the volume at which the audio is output

AFX iPhone app, Software Development, SFU **Sep - Dec 2014**

- Collaborated with 4 other students in the designing and development of a health based iPhone app in Xcode using Objective C which connects with a physical exercising gear
- Worked on sprite animation of the exercises using Photoshop and Adobe Flash to create the animation and embedding it into the app to guide the user on how to perform an exercise using the gear
- Maintaining optimum quality of the app being on the role of Quality Assurance involved with unit testing of the app, writing test cases, performing automated testing

UART Performance Monitor, Real Time System Software, SFU **Sep - Dec 2014**

- Implement a kernel Timer Driver including an interrupt servicing routine in a group of 4 students in a PetaLinux environment and testing the driver on a Zedboard with provided test file
- Writing a C code to create a test file framework for displaying text to a screen by controlling individual pixels through a VGA driver code

CPU Data Path, Introduction to Computer Architecture, SFU **Jan - Apr 2014**

- Designed a virtual machine to perform basic arithmetic operations in VHDL which helped in basic understanding of working of CPU
- Programmed the components required to implement the design such as ROM, Multiplexers, Registers files and connected them in a digital circuit using DesignWorks5

Telephone Directory, Data Structures and Programming, SFU **Sep - Dec 2013**

- Designed a program in C++ to simulates a telephone directory using algorithms such as trees, hash tables and linked lists allowing the user to add, edit and delete contact numbers
- Debugged the code using different inputs, identified errors and fixed them which resulted in improved coding script with no memory loss
- Allowed the user to save data to text file which improved the flexibility of the program

Community Engagement

Peer Educator, Fraser International College, Burnaby, BC **Sep 2013 - Apr 2014**

- Taught peers to achieve success in their studies by explaining the basic concepts of subjects; Physics, Math, Economics, Python and C++

IT Support, Fraser International College, Burnaby, BC **Sep 2014 - Dec 2014**

- Providing support to professors regarding technical issues in the classroom such as connecting projectors to their laptops, wireless connectivity on their mobile devices

Education

Simon Fraser University, Burnaby, BC **Sep 2013 - Present**

- School of Engineering Science, Computer Engineering