SHANJIT SINGH JAJMANN

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CONTACT INFORMATION

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EDUCATION

University of Pennsylvania, Philadelphia(August 2013 - Present)
Masters of Science in Embedded Systems
Department of Computer and Information Science
School of Engineering and Applied Sciences

University of Delhi, New Delhi(August 2009 - June 2013)
B.E. Honors, Electronics and Communication Engineering, 78%
Department of Electronics and Communication Engineering
University of Delhi, New Delhi, India
Honors: Departmental Honors, Indian Air Force Scholarship, Distinction in mathematics courses.

SKILL SET

- Xilinx, PSPICE, EagleCAD, VHDL programming, JTAG debugging (FPGAs and ARM uCs)
- C++, Java, Python, MATLAB, Shell Scripting, Javascript
- Git VCS, Ruby on Rails, Android Application and Platform development

ACADEMIC PROJECTS

Hardware/Software Co-design: ARM micro-controller with FPGAs,
Undergraduate Bachelors of Engineering Thesis Project : January 2013 - June 2013

- Developed a standalone system using a FPGA (XC3S250E) alongside with the ARM Cortex-M3 micro-controller for RSA based encryption and decryption.
- Awarded the best Bachelors of Engineering Thesis Project award by the Department of Electronics and Communication Engineering, University of Delhi.

Multilingual Cloud based Health Monitoring Manager
Texas Instruments Centre for Embedded Product Design, NSIT, New Delhi : July 2011 - Feb 2012

- Developed a stand-alone health logging system using the Texas Instruments based LM3S811 ARM Cortex-M3 micro-controller.
- Hacked a generic physical weighing scale and developed analog circuitry for extracting the values from the four load cells to the ADC of the micro-controller.
- Conceptualized and developed a custom android and web application using the Google App Engine for seamless data transfer and real-time tracking of values.

Mini-Projects on ST Microelectronics and NXP Semiconductors based ARM Cortex-M3 and ARM7 micro-controllers
Texas Instruments Centre for Embedded Product Design, NSIT : March 2011 - November 2011

- Designed and fabricated printed circuit board schematics and gerber files using 'EagleCAD' and a laser printer with ferric chloride for etching.
- Integrated GNU based toolchains with eclipse for setting up development environments for these micro-controllers.

EXPERIENCE

Freelancer and Technology Consultant : June 2013 - Present

- Developed customized Android ROMs for the WM8850 processor based chinese tablets from the Android Open Source Project.
- Rooted latest android devices and configured android internals to achieve client objectives.

Texas Instruments (India) Private Limited, New Delhi
Project Trainee : December 2011 - May 2013
Mentor: Dr. C.P. Ravikumar, Director of University Relations (Technical), Texas Instruments, India and Associate Professor D.V. Gadre, Faculty, University of Delhi

- Developed Hardware and Software Design for custom-made circuit boards using the ARM based Cortex-M3 micro-controllers LM3S608/LM3S811/LM3S9B92.
- Set up the Open Source software environment using GNU based toolchains, Eclipse and proprietary Texas Instruments software.
- Integrated the Debugging Environment (JTAG/Serial Wire Debug interfaces) for ARM micro-controllers using Eclipse with the Open-Souce On-Chip-Debugger.

Software for Education, Entertainment and Training Activities (SEETA), New Delhi
Product Engineer & Software Developer : December 2010 - November 2011
Mentor: Manusheel Gupta, Founder SEETA

- Lead Developer of a Javascript based spreadsheet application on the Android platform.
- Used the webviews alongside and external Google APIs for implementing standard XLS format conversions.
- Implemented the load-save functionality and used Java-Javascript interfaces with JSON format for parsing and exchanging data.
- Conceptualized the research, design and engineering of various mobile and desktop applications.

Sugarlabs - learning software for children
Active Patch Committer : August 2010 - December 2010

- Assisted the in-house Sugar Development team in developing the Sugar Desktop Environment for the One Laptop Per Child (OLPC) project. Committed a number of important patches to the Sugar Ecosystem.
- Learned about various stages in code development cycle, use of version control systems, linux software packaging and distribution.

Publications, TA Positions, Talks

- 'Getting Started with the Stellaris Guru Evaluation Kit, Stellaris ARM Cortex-M3 Lab Manual', Book, Dhananjay V. Gadre, Rohit Dureja, Shanjit Singh Jajmann, Universities Press (India), January 2013
- Teaching Assistant for the Math 104 Calculus Course, University of Pennsylvania (Fall 2013) - Held recitations four-times a week, taught and demonstrated techniques for solving advanced calculus problems.
- Teaching Assistant for the EC-220 Practical Training Course, University of Delhi (Winter 2011, Winter 2012) - Taught and demonstrated hardware designing, fabrication and soldering to students. Assisted the Advisor in managing a class of 150 students and ensured that each student received personal attention.
- Talk on 'ARM Cortex-M3 micro-controllers' at the Indian Institute of Technology, Banaras Hindu University, ARM University Program, April 2012
- Talk on 'Stellaris Guru and its Applications' at the Advanced Faculty Training Workshop at the Centre for Development of Advanced Computing (CDAC), Hyderabad with Texas Instruments University Program, June 2012

Extra-Curricular Activities Other Interests

- Member of the high school badminton and kayaking teams, having represented the school at the regional games.
- Enjoy hiking and listening to hindi music.