SHANJIT SINGH JAJMANN

www.shanjitsingh.in

CONTACT INFORMATION

Unit 2C, 4403 Walnut Street
Philadelphia
United States 19104

Phone:
E-mail: sjajmann@seas.upenn.edu

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 (SEAS)

University of Delhi, New Delhi(*August 2009 - June 2013*)
Netaji Subhas Institute of Technology (NSIT), formerly Delhi Institute of Technology (DIT)
B.E., Electronics and Communication Engineering, 78%

Standardised Test Scores
GRE Score of 321 (Q - 166, A - 155, AWA - 3.5), Test Date (*July 30, 2012*)
TOEFL Score of 105, Test Date (*September 8, 2012*)
IELTS Score of 8, Test Date (*January 5, 2013*)

RELEVANT COURSES

Analog and Digital Electronics, Digital Circuits and Systems, Digital Signal Processing, Network Analysis, Linear Integrated Circuits, Computer System Architecture, Microprocessors, C Programming, Data Structures and Algorithms, Introduction to Communication Theory and Digital Communications.

SKILL SET

Hardware: Xilinx, PSPICE, EagleCAD, VHDL programming, Roland Modela MDX-15, JTAG Debugging (FPGAs and ARM uCs), QEMU ased software emulation
Programming: C/C++, Ruby, Java, Python, MATLAB, Linux Shell Scripting, Javascript, Web and Android App developer

ACADEMIC HONOURS, PUBLICATIONS 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
- Awarded Certificate of Merit by the University of Delhi for distinguished academic performance (*2009-10, 2010-11*)
- Awarded the Subroto Memorial Scholarship, Indian Air Force for academic excellence for four consecutive years (*2009-10, 2010-11, 2011-12, 2012-13*)
- Awarded the prestigious Ramanujan Award - exemplary performance in courses Mathematics I and II in University Examinations (*2009-10*)
- Ranked 22nd in the Regional Mathematics Olympiad from over 100,000 participants and participated in two national camps held at Bangalore and New Delhi (*2007-08*)
- Ranked 22nd in the Regional Mathematics Olympiad from over 100,000 participants held at Bangalore (*2007-08*)
- 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, 2012 at the Centre for Development of Advanced Computing (CDAC), Hyderabad with Texas Instruments University Program (*June 2012*)

ACADEMIC PROJECTS

Hardware/Software Co-design: ARM micro-controller with FPGAs, Undergraduate B.E. Project (*September 2012 - Present*)

- Project Objective: To develop a standalone system using reconfigurable hardware alongside the ARM Cortex-M3 micro-controller for improved performance.
- Awarded the best B.E. Project award by the Department of Electronics and Communication Engineering, University of Delhi.

Multilingual Cloud based Health Monitoring Manager
Texas Instruments Analog Design Contest 2011 (*July 2011 - Feb 2012*)
Texas Instruments Centre for Embedded Product Design, NSIT, New Delhi

- 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 (PCB) 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

Texas Instruments (India) Private Limited, New Delhi
Research Assistant (*December 2011 - May 2013*)
Advisors: Dr. C.P. Ravikumar, Director of University Relations (Technical), Texas Instruments, India and Associate Professor D.V. Gadre, Faculty, NSIT, 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. Used Quick EMUlator (QEMU) for Software Emulation.

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

- Lead Developer of a Javascript based spreadsheet application on the Android platform.
- Used the WebViews design methodology 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.

EC-220 Practical Training Course, NSIT
Teaching Assistant (*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.