VARUN BHAT K N

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An enthusiastic and motivated graduate student looking for Internship opportunity to learn and apply skills and knowledge in the field of Electronics and Computer engineering.

Education

Colorado State University — Jan 2016 - Present
Masters in Electrical and Computer Engineering | GPA: 3.435 — (Anticipated Graduation Dec 2017)

Reva Institute of Technology and Management — Graduated May 2013
Bachelor in Electronics and Communication Engineering | GPA: 3.54

Work Experience

Grader for Computer Organization and Architecture Department of Electrical Engineering	Jan 2017 - Present
CSU Engineering Networking Services Web Developer at ENS	Aug 2016 - Present
Council of Scientific & Industrial Research (CSIR) Project Engineer for CSIR-800 program	Jan 2015 - May 2015
Freelance Developer Software/Firmware Developer	Jan 2015 - May 2015
Indian Institute of Science(IISC) Project Assistant	Oct 2014 - Jan 2015
Tayana Software Solutions Software Engineer	Jul 2013 - Aug 2014
Dfygraviti Technologies Pvt Ltd Intern	Jan 2013 - July 2013

Skills

Languages	C/C++, Java, Python, ASM, Bash
Embedded	AVR C, PIC8 C, Arduino, RPi, MicroPython, ARM
Scientific	Matlab, Python
HDL	VHDL, Verilog, SystemC
Operating Systems	Linux, Mac OS, Windows
Mobile Platforms:	Android, Cordova
Web:	HTML, CSS, JS, PHP, Django, NodeJS, AngularJS
Databases:	MySQL, Oracle, Mongo, SQLite
Cloud Servers/VM:	AWS, Heroku, Azure, Docker
Version Management:	Git, CVS

Relevant Coursework

* Hardware and Software Design of Embedded systems	* Advanced Computer Architecture Engineering	* Machine Learning	* Digital Signal Processing using FPGA
* VLSI Design	* Introductions to Algorithms	* Internet Engineering	

Projects and Roles

Work Related Projects

- **CSIR:** Designed and developed circuit prototype using and firmware, using *PIC micro controllers*, for Wireless Medical Instruments and interfaced the hardware with Android application to control and store Medical Records on a remote cloud server.
- **Freelance:** Took up software projects from *freelancer.com* and designed various Projects Relating to Web Backend, Mobile Application, Firmware design and Network administration on cloud servers.
- **IISC:** Implemented the hardware from the paper on "Design and Evaluation of a Robust Optical Beam-Interruption-Based Vehicle Classifier System". Redesigned the analog signal processing circuit with digital filters controlled by using *Atmel Cortex M0 Microcontroller*
- **Tayana:** Modified and added features to the Signaling Server and Load balancer for sorting incoming calls and SMS from the SS7 network.
- Worked on Call Screening platform and integration with the Web interface, Short Message Switching Centre (SMSC); feature development and bug fixing.
- **Indian Space Research Organization**: Interned at ISRO where we designed and implemented MIL-1553 bus controller interface which interacts with remote terminals of various subsystems with the *8051 IP Core* implemented on an *Actel FPGA* Board in *VHDL*.

Coursework Projects

- **VLSI**: Designed the floor plan for an 8 Bit adder circuit with the help of individual gates matching the specifications using Virtuoso.
- **Internet Engineering:** Designed a POC and tested **a** P2P IoT network implementation for service discovery using a distributed DHT.
- **Embedded Systems: 3D** Ultrasound tomography using FPGA
- **Machine Learning:** Handwriting Recognition using Deep learning.
- **Graduate Project:** Proposing a model for mitigating cross talk due to process variations in Photonic Network on chips.

Independent Projects

- Multi-interfaced Remote Network: Home Automation with Network of Arduino devices connected to switches, communicating to a central master controller (Raspberry Pi) connected to a Mobile and WiFi and Bluetooth. Allows receiving information from an Android or web Interface or sms/call to switch devices and receive sensor readings.
- Dictionary based Speech Recognition implemented using Matlab. Displayed the results of a game implemented using the *speech recognition* on a custom made 16x16 LED matrix.
- OpenCV based path detection Robot using *Arduino* and *Raspberry Pi*.
- TxtWeb(API) based SMS Registration and Notification System, implemented for event registration.
- Arduino based MP3 player with alarm Clock.

Recognitions and Activities

- Achieved 4th in India(166th worldwide) in IEEE Xtreme Coding 6.0 (2012)
- Awarded Best Outgoing Student for overall performance of the Batch-2013
- Awarded Excellence in leadership By Forum of Reva Communication and Engineering (FORCE), 2012
- Conducted workshops in PCB Design, Python, Arduino Programming, Web Development.