PARTH MEHTA

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EDUCATION

Carnegie Mellon University (CMU) - Pittsburgh PA, USA — Aug 2012 - Dec 2013
Masters of Embedded Software Engineering, School of Computer Science — QPA - 3 .85
Representative Coursework: Engineering Distributed Systems, Real Time Embedded Systems, Mobile and Pervasive Computing, Distributed Embedded Systems, Software Architecture and Analysis, Fundamentals of Embedded Systems
Graduate Teaching Assistant: Embedded Real Time Systems

Dhirubhai Ambani Institute of Information and Communication Technology (DAIICT) - India — Jun 2008 - Jun 2012
Bachelor Of Technology in Information Communication Technology — CPI - 9.11/10

PROJECTS

Internet of Things, CMU and Bosch RTC, Pittsburgh *(Team Size – 4)* — Jan 2013 - Aug 2013
- Designed a peer-to-peer framework for service discovery in a house
- Developed a reliable multicast over UDP and a location matching scheme to enable indoor semantic based addressing
- Demonstrated capabilities of framework by an application for streaming music near a user with 'follow me' feature
- Framework and applications implemented on Android, Raspberry PI (Java) and Arduino platforms.

Power aware scheduler on Android Kernel, CMU *(Team Size – 3)* — Aug 2012 - Nov 2012
- Added kernel customizations for real-time and power aware scheduling in Android kernel
- Saved 10% battery life over 8 hours on apps like Music Player, Temple Run and YouTube.
- Performed multi core scheduling by implementing bin-packing heuristics on quad-core nexus 7 platform

Multi server photo sharing application with two phase commit, CMU *(Team Size – 1)* — Apr 2013 - May 2013
- Developed web application for sharing pictures at parties using Python based Flask framework
- Used multiple server instances to cater to more clients uploading pictures simultaneously
- Implemented a two phase commit protocol for maintaining consistency among different servers

Dynamic pre-fetching and De-duplication in Coda - distributed file system, CMU *(Team Size – 1)* — Feb 2013 - Apr 2013
- Improved access latency by 30% using dynamic pre-fetching of files in Coda
- Avoided unnecessary file uploads to server using SHA1 hash and look aside database (de-duplication)
- Added the Pre-fetching in coda client and de-duplication feature in coda server, implemented using C as well as C++

Adaptive replacement cache(ARC) beating LRU in OpenISR, CMU *(Team Size – 1)* — Jan 2013 - Feb 2013
- Replaced LRU cache algorithm with ARC algorithm for in memory cache of VM chunks.
- Developed on the OpenISR virtual machine migration project in C.
- Analysed various workloads to compare performance, Bootup workload giving 10% increase in hit ratio.

Custom search engine for Textfiles.com, CMU *(Team Size – 3)* — Nov 2012 - Dec 2012
- Created application in Java to crawl and search in www.textfiles.com
- Used In-memory as well as disk caching for optimized search and better results
- Created search feature for keyword as well as hyperlink search.

EXPERIENCE

Baloonr, Project Olympus Probe, CMU — Feb 2013 - May 2013
Volunteer Developer
- Designed data models and finalized the technology stack for creative content sharing platform

Imagination Technologies, India Development Centre - Pune, India — Dec 2011 - Apr 2012
Project Intern, Video Decoder Team
- Integrated VXD, multi-standard video decoder IP core, into the Linux based multimedia framework, Gstreamer
- Tested and verified complete integration against a test database of about 1500 test streams

AEWIN Technologies Co, Ltd. - Taipei, Taiwan — May 2011 - July 2011
Project Intern, Arcade Gaming Department
- Wrote a PCI driver in Linux to communicate with an on board FPGA.
- Designed and implemented the FPGA firmware to communicate with the PCI IP core and drive a slot machine motor

PUBLICATIONS

VI-Navi: A Novel Indoor Navigation System for Visually Impaired, DAIICT *(Team Size – 3)* — Oct 2010 - Dec 2011
- Results published in "CompSysTech 2011" at Vienna, Austria
- Responsible for circuit design and programming the 8 bit microcontroller ATmega32 in C.

SKILLS

Languages: C, Java, Python, C++, ARM assembly
Tools and Technologies: Android, Gstreamer, libvirt, Xilinx ISE

LEADERSHIP

Head of Special Interest Group Embedded Systems, IEEE Student Branch, DA-IICT — 2011 - 2012
Elected member of the Student Body Government-Cultural Committee — 2009 - 2010