

# Mihir Shete

COMPUTER SCIENCE GRADUATE STUDENT @ UW-MADISON

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## Education

### University of Wisconsin-Madison

Madison, Wisconsin

M.S. IN COMPUTER SCIENCE

September 2015 - May 2017(Expected)

- Focusing on research and development in Operating Systems, Computer Networks and Internet of Things.
- Developing **Smart Shoes** for use in Healthcare, Fitness and Virtual Reality applications at **Internet of Things Lab**.
- **Coursework:** Operating Systems, Introduction to Computer Networks, Machine Learning.

### Birla Institute of Technology and Science - Pilani, Goa Campus

Goa, India

B.E(HONS.) IN ELECTRONICS AND INSTRUMENTATION

August 2006 - May 2010

- Concentrated on projects and internships in the areas of Embedded systems' design and development.
- Got involved in the PSoC club which was newly founded and contributed to designing training material which is used by Cypress Semiconductor as the official Lab Book for the University Alliance Program.
- **Coursework:** Embedded System Design, Medical Instrumentation.

## Experience

### Qualcomm

Hyderabad, India

SENIOR ENGINEER

July 2012 - July 2015

- As a member of Wireless Connectivity group was involved in design and development of firmware and Linux device drivers for Qualcomm's wireless chipsets.
- Primarily contributed to Qualcomm's opensource **Prima** driver and was the maintainer of data path and the DMA driver.
- Collaborated with the Linux community to engineer the regulatory framework in Prima driver.

### TeamF1 Networks

Hyderabad, India

SOFTWARE ENGINEER

May 2010 - June 2012

- Design and Development of Linux device drivers for 802.11 Wireless SoCs in Enterprise Routers.
- Worked on securing the WiFi Alliance's 802.11n certification for interoperability.
- Involved in development of a 802.11r solution independent of the available open source alternatives.
- Implemented the RSTP functionality for Access Points.

### HTCondor

Madison, Wisconsin

STUDENT INTERN

September 2015 - PRESENT

- Design and development of regression test framework for HTCondor, which is an Open-Source software for coarse-grained distributed parallelization of computationally intensive tasks.

### Birla Institute of Technology and Science - Pilani, Goa Campus

Goa, India

PROFESSIONAL ASSISTANT

January 2010 - May 2010

- Professional Assistant for the course - Analog Electronics(INSTR C364)
- Responsibilities included overseeing and grading Lab sessions.
- Involved in designing assignments for the students.

### Cypress Semiconductor

Chennai, India

Co-Op

July 2009 - December 2009

- Designed a Blood Pressure Monitor reference solution using Cypress' SoCs.
- Involved in PCB design and development.
- Developed BP calculating algorithms based on the current research and implemented them in C and Matlab.

## Skills

**Programming** C, C++, Python, Perl, Lua, Shell Scripting, Javascript, Latex, Matlab, Java

**Tools** vim, Eclipse, Android Development Studio

## Academic Projects & Research

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### Smart Shoes in Healthcare Management

*Madison, Wisconsin*

INTERNET OF THINGS LABORATORY, UW - MADISON

*October 2015 - PRESENT*

- Our Aim is to build a continuous gait monitoring device which can be used in the healthcare industry for managing recovery of patients recovering after hip and knee surgeries.
- Our first demonstration won the **Most Innovative Technology** award in the IoT Open-House at UW - Madison.
- We are currently working on developing robust algorithms and optimizing our system for efficiency and accuracy.

### Design and Development of Blood Pressure Monitor

*Goa, India*

BITS - PILANI, GOA CAMPUS

*Jan. 2010 - April 2010*

- Developed simulation of circuits and filters involved in the designing of a BP Monitor so that they can be improved upon.
- Another aspect of this project was to survey available BP calculating algorithms and implement them in Matlab/Octave so that they can be studied in detail and be improved for better accuracy.

### Design and Verification of Safety Critical Systems

*Goa, India*

BITS - PILANI, GOA CAMPUS

*Jan. 2010 - April 2010*

- A survey of the established standards for designing safety critical systems guided by **Dr. K.R Anupama**.

## Open Source Contributions

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**MSM Linux Kernel** Subsystem-Restart feature development and wireless regulatory framework maintenance

**Prima Driver** Added code to support new DMA hardware and worked on data path maintenance

**HTCondor** Contributing on developing an improved unit-test framework in perl and C

## Course Projects

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**Unix Shell** A simple shell with support for Batch and Interactive modes, command history and redirection

**Xv6 Kernel Programming** Implemented MLFQ scheduler, threading support, dynamic stack growth functionality and a reliable filesystem

**UDP Packet Blaster** Implemented a UDP based network analyzer