

# Abhiram Balasubramanian

(801) 867-0146

abhiram.balasubramanian@utah.edu

abhirambal.github.io

## SUMMARY

- Seeking a full-time position as a Systems/Software Engineer.
- Areas of Interest : Low-level kernel development/systems programming, hard real-time embedded systems programming and debugging/performance analysis.

## EDUCATION

### University of Utah

Master of Science, Computer Science (Thesis Track)

GPA : 3.8/4.0

Expected : August 2017

### Sri Ramakrishna Institute of Technology, Anna University

Bachelor of Engineering, Electronics and Communication Engineering

GPA : 76%

May 2010

## PROFESSIONAL EXPERIENCE

### Samsung Research America

Mountain View, CA

Intern

May 2016 - August 2016

- Built a protection domain library to support fault isolation using safe features of Rust
- Implemented fault recovery mechanism, compiler plugin to support automatic checkpointing of objects

### Robert Bosch India

Coimbatore, India

Senior Software Engineer

May 2013 - July 2015

- Design of PCIe Multi-IO card to aid autonomous driving for Mercedes Benz.
- Hardware debugger (JTAG) design using openOCD for Embedded IDE.
- Optimizing interrupt latency on automobile's ECU running RT-Linux

### Kalycito Infotech

Coimbatore, India

Senior Design Engineer

October 2010 - April 2013

- Worked on Open-source real-time Industrial Ethernet stack - openPOWERLINK
- PCIe based high-performance openPOWERLINK master on Xilinx platform.
- Linux BSP development/board bring-up on evaluation platforms.

## RESEARCH EXPERIENCE

### Flux Research Group

University of Utah

Graduate Research Assistant

August 2015 - Present

- Fast NVMe layer for a decomposed Linux kernel (Master thesis)
- Mitigation of SROP attacks in Linux kernel - submitted a patch to Linux Kernel

## PUBLICATIONS

- Abhiram Balasubramanian, Marek S. Baranowski, Anton Burtsev, Aurojit Panda, Zvonimir Rakamaric, Leonid Ryzhyk. *System Programming in Rust: Beyond Safety (HotOS'17)*

## RELEVANT SKILLS

- **Programming languages:** C, Rust, Python, x86/ARM Assembly, Shell scripting
- **Version Control:** git and SVN
- **Protocols/Standards:** NVMe, PCIe, JTAG, SPI, I2C, RS232, Ethernet POWERLINK, CAN 2.0