Siddhant Ekale

Computer Engineer

(765)-772-8212
sekale@purdue.edu

Github: https://github.com/sekale
LinkedIn: www.linkedin.com/in/siddhantekale
Personal: https://sekale.github.io/

EDUCATION

Purdue University — BS, Computer Engineering — CGPA: 3.52/4.00
Graduation Date: December 2016

WORK EXPERIENCE

Lutron Electronics — Software Engineering Intern — *Coopersburg, PA, USA* — *Summer 2016*

- Optimized firmware update algorithms to support up to a 2x speed improvement. Worked on ICD Cold-Fire microcontroller device specific code (in C) and integrated it with win-forms application for field engineers. (*Project Value: $800 per day*)
- Win-forms application developed (from conception to implementation) for firmware update support (VS 2015, .NET 4.5 framework)
- Led weekly design and code reviews, accomplished two internal releases for the developed application (*built from scratch*).

Purdue University — Teaching Assistant (*Computer Architecture*) — *West Lafayette, IN, USA* — *Fall 2016*

- Assisted students in debugging design specific questions for MIPS 32 bit single/pipelined/cached/multicore processor

Purdue University — Teaching Assistant (*Introduction to C*) — *West Lafayette, IN, USA* — *Spring 2015*

- Led a lab of 30 students, setting assignments, and briefing important concepts (mainly arrays and pointers).

Extentia Information Technology — Software Engineering Intern — *Pune, MH, India* — *Summer 2014*

- OCR Integration using a proprietary library into currently deployed Win Phone Applications using VS 2013 on .NET 4.5 framework.
- Cross browser compatibility testing for web applications and daily bug fixes.

PROJECTS

Infiniti (HackIllinois *Intel, First Prize)* — *UIUC 2016*

- Built a server side game controller by integrating it with Intel Edison processor, interfaced with accelerometer.
- Role: Calibrating the accelerometer by writing code to interpret <x, y, z> values and set appropriate flags to interface with JavaScript game app as well as helping Django server configurations.

MIPS Processor Design — *Purdue 2016*

- Pipelined design for parallel execution of instructions (Hazard Detection and Branch Prediction)
- Cache Interface (I-Cache & D-Cache), *Multicore* processor implementation with coherence controller. *(MSI Protocol)*
- My Contribution (Design and Implementation): Pipelined data-path, Cached interface, Branch prediction.

Project Glass — *Purdue 2016*

- Wearable gear designed for displaying Android Notifications on an OLED projected in front of the eye.
- Weather data extraction using API, SPI interfaced for OLED, Bluetooth LE interfaced for duplex communication

Purdue SOC Design Team — *Purdue 2016*

- Worked on implementing a Platform Level Interrupt Controller for a RISC-V core implementation
- Wrote UART software driver for the SOC equipped with interrupt handlers and call back functions.

Compiler Design — *Purdue 2016*

- Built a fully functional compiler using ANTLR, for custom “LITTLE” language.
- Wrote code for converting Intermediate Code to MIPS Assembly, register allocation using dataflow analysis.

LEADERSHIP AND ACADEMIC ACHIEVEMENTS

Semester Honors — *(Fall 13, Spring 14, Fall 14, Fall 15, Spring 16)*
Cofounder, Purdue Social Services Network — *2015*
EPICS Lead Lafayette Crisis Center Project — *2014*

RELEVANT COURSEWORK

DS & Algorithms, Compilers, Computer Architecture, ASIC Design, Embedded Systems, Signals and Systems

PROGRAMMING SKILLS AND TOOLS

C, C++, C#, Java, Python, Bash, System Verilog, VC using Git, JIRA