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Siddhant Ekale

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Education

Purdue University	Senior, Computer Engineering	GPA: 3.52/4.00
		Graduation: December, 2016

Relevant Coursework

Advanced C Programming (Memory Handling), Algorithms and Data Structures (in 'C'), Microprocessor Interfacing, Computer Architecture, OOP with Python/Bash Scripting, ASIC Design (System Verilog), Digital System Design

Skills and Tools: C, C++, C#, Python, Bash, System Verilog, Android App Development (Java), Git, JIRA

Work Experience

Embedded Software Intern	Lutron Electronics, Coopersburg, PA	June 6th – Aug 12th, 2016

- Optimizing 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 a Win-forms application.
- Win-forms application developed for firmware update support, with approved code architecture (.NET 4.5, VS 2015)
- Leading weekly design and code reviews, accomplished two internal releases for the application (built from scratch).

Teaching Assistant	Purdue (Computer Architecture)	Fall 2016

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

Teaching Assistant	Purdue (Introduction to C)	Spring 2015

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

Engineering Intern	Extentia Information Technology, Pune	July 10th – Aug 10th, 2014

- Developed (from scratch) Windows Phone 8.0/8.1 applications for client. (.NET 4.5)
- OCR Integration using a proprietary library into current functioning project. (WP 8.1 App)

Engineering Intern	Metito Overseas Ltd, Sharjah, U.A.E	June 28th - July 28th, 2013

- Water treatment training – Reverse Osmosis Process, Membrane Testing, Valve specifications, Project Planning

Projects

Team	Hackathon: **(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.

Team	MIPS 32-bit Processor Design	Purdue 2016

- Single Cycle Design and Implementation (Individual)
- 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.

Individual	Mini-Social Networking Application	Purdue 2016

- C implementation of social network making friendships based on common parameters.
- Dijkstra's algorithm used to calculate distance between two friends, for suggested friend's API

Team	Purdue SOC Design Team	Purdue 2016

- Working on implementing a Platform Level Interrupt Controller for a RISC-V core implementation

Leadership and Academic Achievements

- Co-founder, Purdue Social Services Network (Building network of students for community service)
- Dean's List and Semester Honors (Fall 13', Spring 15', Spring 16')
- EPICS: Lead Lafayette Crisis Center Project (Developing Database Architecture for maintaining employee records)