William J. Snow

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OBJECTIVE To design and test hardware, to develop software, and to problem solve my way through exciting projects and collaborative environments that challenge me

EDUCATION **B.S., Computer Engineering** May 2014
Purdue University, West Lafayette, IN

PROJECTS **Chance the Rapper** *Freelance* September 2016
- Served as lead engineer for costume electronics on Chance the Rapper's *Magnificent Coloring Tour*
- Developed software in C++ using Arduino toolchain to display lighting effects on 366 sewn-in LEDs

Jeco Plastic Products *Consultant* June-August 2016
- Designed temperature monitoring system using Raspberry Pi boards and web app interface
- Programmed in C for thermocouple driver and unix socket API, Javascript for Node web app

Pricesourcing.com *Lead Developer* July-October 2013
- Prototyped a front and back end for vendor-to-customer online aggregator
- Collaborated with a professional graphic web designer for UX and SEO
- Implemented scalable back end in PHP and MySQL

Target Acquisition and Retrieval *Senior Design Lab* Fall 2013
- Automated embedded system found targets and directed crane to retrieve them one at a time
- Devised a custom bidirectional serial bus for all subsystems using commodity TTL parts and PLDs
- Utilized a live NTSC signal from CCD camera sensor converted to digital x-y coordinates
- Drove stepper motors to move crane and pick targets with electromagnet

Safecam *Embedded Systems Lab* Spring 2014
- Consumer home safe fitted with keypad and camera that connects to home wifi network
- Interfaced electronic keypad and camera to Raspberry Pi development board
- Provided web user interface with programmable key code and photo capture

MIPS Dual Core Microprocessor *Computer Architecture Lab* Fall 2013
- Synthesized MIPS ISA subset onto Altera Cyclone II FPGA development board
- Implemented 2-way associative caches with write-back cache coherency and ll/sc atomic instructions
- Wrote full block level test benches as well as benchmarks measuring real world performance

Alarm Clock *Microcontrollers Lab* Fall 2012
- Freescale microcontroller (state machine loop w/ periodic interrupts) kept full calendar time
- Incorporated full peripheral suite (DAC, ADC, SPI, TIM)

Picture Frame Viewer *ASIC Design Lab* Fall 2010
- Digital ASIC converted bitmap images from SD card over SPI to LCD display over DVI
- Design and verification for interfaces, constraints, RTL, synthesis map, and layout

SKILLS **Commercial Software**

Mentor Graphics (ModelSim, HDL Designer), Cadence (SOC Encounter, Virtuoso, OrCad Capture/Pspice A/D), Synopsys Design Compiler Ultra, Altera Quartus II, EagleCAD, Altium Designer, Freescale Codewarrior, TI Code Composer Studio, Arduino IDE, Matlab, Catia V5

Languages

C, C++, Java, VHDL, Verilog, ABEL, Assembler (x86, MIPS & 68HC11), ksh93/bash/tcsh, Python, PHP, Javascript, Go, Ruby

AWARDS Eaton Award for Best Senior Design
Semester Honors Fall 2013 and Spring 2014