

# William J. Snow

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<b>OBJECTIVE</b>	To design and test hardware, to develop software, and to problem solve my way through exciting projects. I love challenging environments and opportunities to learn and advance.		
<b>EDUCATION</b>	<b>B.S., Computer Engineering</b> Purdue University, West Lafayette, IN		May 2014
<b>PROJECTS</b>	<b>Chance the Rapper</b>	<i>Freelance</i>	September 2016
	<ul style="list-style-type: none"><li>Served as lead engineer for costume electronics on Chance the Rapper's <i>Magnificent Coloring Tour</i></li><li>Wrote software for and designed visual effects using 366 LEDs and ATmega32 microcontroller</li></ul>		
	<b>Jeco Plastic Products</b>	<i>Consultant</i>	June-August 2016
	<ul style="list-style-type: none"><li>Designed a temperature monitoring system for rotational moulding plastic manufacturing</li><li>Assembled sensor unit prototypes: microcontrollers interfaced with thermocouples</li><li>Demonstrated wireless sensor network with remote monitoring and control via workstation</li></ul>		
	<b>Pricesourcing.com</b>	<i>Lead Developer</i>	July-October 2013
	<ul style="list-style-type: none"><li>Prototyped a front and back end for vendor-to-customer online aggregator</li><li>Collaborated with a professional graphic web designer for UX and SEO</li><li>Implemented scalable back end in PHP and MySQL</li></ul>		
	<b>Target Acquisition and Retrieval</b>	<i>Senior Design Lab</i>	Fall 2013
	<ul style="list-style-type: none"><li>Automated embedded system found targets and directed crane to retrieve them one at a time</li><li>Devised a custom bidirectional serial bus for all subsystems using commodity TTL parts</li><li>Utilized a live NTSC signal from CCD camera sensor converted to digital x-y coordinates</li><li>Drove stepper motors to move crane and pick targets with electromagnet</li></ul>		
	<b>Safecam</b>	<i>Embedded Systems Lab</i>	Spring 2014
	<ul style="list-style-type: none"><li>Consumer home safe fitted with keypad and camera that connects to home wifi network</li><li>Interfaced electronic keypad and camera to Raspberry Pi development board</li><li>Provided web user interface with programmable key code and photo capture</li></ul>		
	<b>MIPS Dual Core Microprocessor</b>	<i>Computer Architecture Lab</i>	Fall 2013
	<ul style="list-style-type: none"><li>Synthesized MIPS ISA subset onto Altera Cyclone II FPGA development board</li><li>Implemented 2-way associative caches with write-back cache coherency and ll/sc atomic instructions</li><li>Wrote full block level test benches as well as benchmarks measuring real world performance</li></ul>		
	<b>Alarm Clock</b>	<i>Microcontrollers Lab</i>	Fall 2012
	<ul style="list-style-type: none"><li>Freescale microcontroller (state machine loop w/ periodic interrupts) kept full calendar time</li><li>Incorporated full peripheral suite (DAC, ADC, SPI, TIM)</li></ul>		
	<b>Picture Frame Viewer</b>	<i>ASIC Design Lab</i>	Fall 2010
	<ul style="list-style-type: none"><li>Digital ASIC converted bitmap images from SD card over SPI to LCD display over DVI</li><li>Design and verification for interfaces, constraints, RTL, synthesis map, and layout</li></ul>		
<b>SKILLS</b>	<b>Commercial Software</b> Mentor Graphics (ModelSim, HDL Designer), Cadence (SOC Encounter, Virtuoso, OrCad Capture/Pspice A/D), Synopsys Design Compiler Ultra, Altera Quartus II, Freescale Codewarrior, TI Code Composer Studio, EagleCAD, Altium Designer, Matlab, Catia V5 <b>Languages</b> C, C++, Java, VHDL, Verilog, Assembler (x86, MIPS & 68HC11), ksh93/bash/tcsh, Python, PHP, Javascript, Go		
<b>AWARDS</b>	Eaton Award for Best Senior Design Semester Honors Fall 2013 and Spring 2014 Eagle Scout		