

Kevin Bretney
kbretney@sandbox-ed.com

San Diego, CA

EDUCATION

Franklin W. Olin College of Engineering

May 2009

Bachelor of Science in Electrical and Computer Engineering

Relevant Courses

- Distributed Engineering Design, Robotics, Computer Architecture, Analog/Digital VLSI, Mobile Application Development, Principles of Intelligent Systems Engineering, Senior Consulting Program for Engineering (SCOPE)

SKILLS

- Computer: Solidworks, Matlab, Linux, uClinux, C, Python, Eagle, Cadence, Linux and Office
- Machine Shop: Lathe, Vertical Mill, most machine tools
- Microcontrollers/embedded computing: PIC, Arduino, lpc2xxx, Gumstix, Blackfin

EXPERIENCE

Course Projects, Olin College

SCOPE

Fall 2008-Spring 2009

- Project manager for a consultancy project working with a new 3D imaging sensor.
- I developed a low overhead, 3D differential velocity muting algorithm.

Principles of Intelligent Systems Engineering

Spring 2009

- Designed and coded a 2D acoustic positioning system.
- Wrote C code for interfacing a custom parallel interface analog converter with a Blackfin DSP running uClinux.

Distributed Engineering Design

Spring 2008

- Project Leader of an international team of students designing a novel shade system for a Swiss client.

Principles of Engineering

Fall 2006

- Designed and prototyped an inertial navigation system for an autonomous airplane.
- The code was written in C for an embedded DSP.

Work Experience

Perfect Switch LLC

Summer 2007-Present

- Perfect Switch is a small startup that designs and manufactures very efficient solid-state relays and power management devices.
- I have designed an automated machine to cut and bend FET pins, designed and machined fixtures for automating assembly, and designed and helped troubleshoot a new plastic insert-molding product encapsulation process.
- I currently work on custom engineering for customers, new product design and testing.

Seabotix Inc.

Summer 2006

- Seabotix is a small company that designs and manufactures tethered underwater vehicles.
- Engineering Intern, designed a novel remote manipulator with Solidworks.

PERSONAL PROJECTS

5-Axis Inertial Measurement Unit/Autopilot

Fall 2008-Present

- Researched components, did schematic capture and layout in Eagle, assembled boards and verified functionality.
- Writing and debugging C code for servo control and signal processing in C for a PIC

Interests

Computers, R/C vehicles, Running, Swing Dancing and Hip-Hop, Acting, DJing