

# Douglas Concors

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## Personal Profile

An enthusiastic embedded software engineer with a focus on hardware hacking and device drivers. I have 6 years of experience developing drivers and hardware platforms for Cubesat radios running linux and custom FPGA IP cores. I am searching for an opportunity to help a small business with software and FPGA integration.

## Education

**BS Computer Science (2016)** - California State University at San Marcos

## Employment History

**Jan 2014 - Present** - Vulcan Wireless  
*Embedded Software Engineer*

### **Skills:**

*Driver development* - Wrote drivers to allow linux SDR applications communicate with custom memory mapped VHDL IP cores.

*Hardware bringup* - Ported linux distributions such as buldroot to new radio hardware, designed and troubleshot schematics, created build automation scripts to deploy applications and IP to the new hardware.

*IP Integration* - Created and modified IP interconnect designs to allow processors to communicate with virtual devices within an FPGAs.

**Technologies:** Xilinx Vivado, Xilinx SDK, GNU MAKE, Python, C, Bash, VHDL

**Mar 2013 - Jan 2014** - Staples INC  
*Easytech Associate*

Sold and repaired electronic devices, interfaced with customers.

## Hobbies and Personal Projects

**FPGA Synthesizer** Quad channel audio synthesizer controlled via SPI implemented in VHDL.

**Demoscene projects** Various video rendering demonstrations using a low power 16-bit microcontroller.

## Software Engineering Skills

### ■ **Programming Languages**

*C* - Microcontrollers (MSP430, AVR), chip-to-chip communication (SPI, I2C, memory map, serial), Linux drivers, threading, and networking

*VHDL* - Create new IP, integrate existing IP into new designs

*Python* - PySerial, sockets

### ■ **Miscellaneous**

*Git* - Source code version control

*Soldering* - Can solder 0804 SMT and QFP

*Microsoft Office* - Word, Excel, etc