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

Apr 2021 - Voyetra Turtle Beach
Firmware Engineer

Sklls:
Firmware Development - Developed firmware for new devices and maintained firmware for existing products.
Software Development - Maintained firmware configuration software for testing prototype devices.

Dec 2020 - Mar 2021 Quantum Design
Embedded Software Engineer

Skills:
Test Development - Wrote a simple python GUI application to read and write FPGA registers for board verification.
Feature Upgrades - Add feedback for reading status of air pressure switches in Microscope from GUI software

Jan 2014 - Dec 2020 Vulcan Wireless
Embedded Software Engineer

Skills:
Driver development - Wrote drivers to allow Linux SDR applications communicate with custom memory mapped VHDL IP cores.
Hardware bring-up - Ported Linux distributions such as buildroot 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
  C# - Updated diagnostic control GUI software for prototype devices

- **Miscellaneous**

  Git - Source code version control
  Soldering - Can solder 0804 SMT and QFP
  Microsoft Office - Word, Excel, etc