

CAREER PROFILE

- Electrical Engineer graduate with honors distinction.
- Worked as independent contractor twice during college.
- Experience working as software engineer for two years during college.
- Learned Android, Python, Git and Linux command line tools from on-line tutorials/videos.

EXPERIENCES

Senior Software Engineer

12.2021 - PRESENT

ESW Team at Appareo Systems

- Performed board bring-up for custom PCB with heterogeneous SOC (IMX8DXL).
- Integrated drivers for cellular modems, WiFi, and bluetooth.
- Setup dockerized Jenkins with both manual and GitOps centric builds.
- Utilized Gitflow including automated build and deployment of releases.
- Developed and utilized HIL testing with Labgrid on RPI4.
- Generated SDKs and docker images for quick cross-compilation of C++ Applications.

Software Engineer 1

05.2017 - 12.2021

System Team at Vaddio

- Working with FPGA and python developers to create an integrated embedded system that routes audio and video signals in professionally built AV systems.
- I help to build a custom Linux distribution from the 'r' up with the Yocto Project.
- Our team uses many other tools during development such as Jenkins, Jira, Git, Bitbake, and Puppet.

Software Engineer

11.2018 - 12.2021

Dojo Five

- Develop embedded software for Particle, Nordic, and STM32 microcontrollers
- Utilized custom hardware with the Particle platform for a custom door access solution
- Developed with NRF52 SDK to create devices in a complex robotic system with BLE services

Student Intern

05.2016 - 05.2017

Hardware Design at Daktronics

- Developed C++ code for communication with I2C sensors from a Linux system.
- Developed a C++ library that simplifies usage of librrd, a C library for creating, updating, and using RRDs (Round Robin Databases).
- Used Test Driven Development to implement library, used CxxTest Framework.

PROJECTS

Hardware Integrated Prototyping Environment at SDSU Engineering Expo - Nathan Genetzky, Jordan Ulmer, Tanner Johnson (SDSU, 2017)

Design and Verification of a SPI to JTAG Interface Adapter - Nathan Genetzky, Jordan Ulmer (SDSU, 2017)

Interactive User Interface with PIC18 Microcontroller - Nathan Genetzky, Drake Jen0 (SDSU, 2017)

Particle Projects - Firmware for micro controllers sold by particle.io for use with wifi or cellular cloud devices.

SKILLS & PROFICIENCY

Yocto (Build System, Embedded Distro, BSP Support)



Developer Tools (Docker, Jenkins, Git)



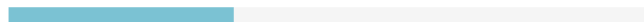
Terminal Workflow (Vim, GNU tools, shell scripting)



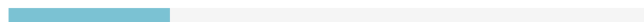
Linux Kernel (Drivers, Config, BSP)



Python Middleware (DBus, REST, GObject, threading)



FPGA Development (SW Interface, Reusable Verilog, Automated Builds)



Nathan Genetzky

Software and Hardware

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EDUCATION

BS Electrical Engineering

South Dakota State University
2012 - 2017

Minor Software Engineering

South Dakota State University
2012 - 2017

LANGUAGES

Bash (~7 years)

Python (~5 years)

Cpp (~6 years)

C (~4 year)

Dockerfile (~2 year)

Java for Android (~1 year)

INTERESTS

hobby-electronics, home automation, embedded-linux

ice and rock climbing

snowboarding and skiing

gardening, cooking

jetskiing, boating, water skiing

camping, kayaking, volleyball