Nathan Genetzky

Software and Hardware

✉ nathan@genetzky.us

🌐 academic.genetzky.us

in linkedin.com/in/genetzky

github.com/NGenetzky

🐦 @NGenetzky

👤 CAREER PROFILE

- Recent 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

Software Engineer 1
05.2017 - PRESENT
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 '/' 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 - PRESENT
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.

Student Technology Fellow
08.2013 - 05.2016
Classroom Technology Services at SDSU

Research Assistant
03.2013 - 05.2016
EECS Department at SDSU

Software Developer Resident
06.2015 - 12.2015
Subcontractor for Earth Resources Observation Systems

Sputtering System Lab Technician
09.2014 - 02.2015
NASCENTechnology

📋 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 Jeno (SDSU, 2017)

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

🧭 SKILLS & PROFICIENCY

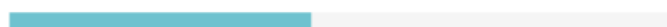**Yocto (Build System, Embedded Distro, BSP Support)**
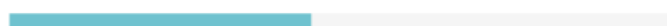
Developer Tools (Docker, Jenkins, Git)
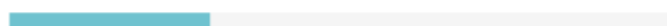
Terminal Workflow (Vim, GNU tools, shell scripting)

Linux Kernel (Drivers, Config, BSP)

Python Middleware

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

EDUCATION

BS Electrical Engineering
South Dakota State University
2012 - 2017

Minor Software Engineering
South Dakota State University
2012 - 2017

LANGUAGES

Cpp (~5 years)

Bash (~4 years)

Python (~3 years)

C (~2 year)

Verilog (~2 years)

Java for Android (~1 year)

INTERESTS

Climbing

Snowboarding

Cooking