

## 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.

**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

- Fixed issues with Windows computers related to networking or hardware.
- Installed smartboards, projectors, computers, audio systems and teaching stations.

**Research Assistant** 03.2013 - 05.2016  
EECS Department at SDSU

- First undergraduate authorized to use the Scanning Electron Microscope.
- Built and helped design a vacuum sputtering deposition system.
- Installed many complex systems: heater with feedback control, gas flow control, vacuum gauges, rough pump, turbo pump, and magnetron sputtering sources.

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

- Wrote python code utilized in a production system used by scientists worldwide.
- Member of a small team using agile development methods.
- Researched upcoming technologies and techniques: Hadoop, Docker, map reduce, Microservices, and distributed processing systems.

**Sputtering System Lab Technician** 09.2014 - 02.2015  
NASCENTechnology

- Operated Ion Beam Assisted Deposition System to produce Flyback transformers.
- Repaired or installed components on the sputtering system.

## 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 Jenö (SDSU, 2017)

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

## SKILLS & PROFICIENCY

Terminal Workflow (Vim, GNU tools, shell scripting)	<div style="width: 70%;"></div>
Developer Tools (Docker, Jenkins, Git)	<div style="width: 70%;"></div>
Yocto (Build System, Embedded Distro, BSP Support)	<div style="width: 70%;"></div>
Linux Kernel (Drivers, Config, BSP)	<div style="width: 70%;"></div>
Python Middleware	<div style="width: 70%;"></div>
FPGA Development (SW Interface, Reusable Verilog, Automated Builds)	<div style="width: 70%;"></div>

# Nathan Genetzky

Software and Hardware

✉ nathan@genetzky.us

🌐 academic.genetzky.us

in linkedin.com/in/genetzky

🔗 github.com/NGenetzky

🐦 @NGenetzky

## EDUCATION

**BS Electrical Engineering**  
South Dakota State University  
2012 - 2017

**Minor Software Engineering**  
South Dakota State University  
2012 - 2017

## LANGUAGES

Python (~3 years)

Bash (~3 years)

Cpp (~3 years)

Verilog (~2 years)

C (~1 year)

Java for Android (~1 year)

## INTERESTS

Climbing

Snowboarding

Cooking