

(720) 400-1183
Fort Collins, Colorado
pdj1183@gmail.com

Phillip Johnson

Junior Software Engineer

Portfolio
GitHub
LinkedIn

SKILLS

Tools and Languages: JavaScript, Python, C/C+, Java, Swift, React, CSS, HTML, Git, MySQL, NeoVim
Reverse Engineering: PCB Reverse Engineering, PCB Testing, Oscilloscope and Signal Analyzers

PROJECT EXPERIENCE

IoT Sensing Device

SAADC, nRF Connect SDK, Reverse Engineering

- Recreated application based on the observed functionality of the Black-Box IoT device.
- Used SAADC on nRF 9160DK to measure the signal from the load sensor.
- Created AWS IoT Core device and DynamoDB to receive and store IoT messages from device.

Portfolio E-Commerce Website

NextJS, React 18, Flask, SQLite

- Created to experiment with NextJS and Python Flask servers.
- NextJS was used for its optimization features.
- Made a RESTful API for user authentication and a SQLite database for post storage.

Personal Portfolio Website

React 18, React-three-fiber

- Created a single-page personal portfolio created to display my personal projects.
- Hosted on GitHub Pages.

iOS Swift Application

Swift, NSPersistentCloudKitContainer

- Application created to store and recommend albums based on the user's album collection.
- Uses iCloud to store album collection allowing for easy cloud syncing.

Trip Planning / Optimization Website

React 16, Java RESTful API, Scrum

- Worked in Scrum team to implement features on existing repository.
- Added helpful features such as importing/downloading trips and optimizing routes for shortest distance.
- Improved user experience.

JOB EXPERIENCE

Undergraduate Research Assistant

Colorado State University

May 2023 — June 2024

Fort Collins, Colorado

- Conducted research on Hardware Reverse Engineering as a framework for enhancing security.
- Led information gathering and recreation of PCB schematics to identify inherent hardware vulnerabilities.
- Recreated IoT Sensing device application.
- Developed and executed an attack on a blackbox device, compromising its sensor output by up to 30
- Co-authored iFIPSEC 2024 conference research paper, sharing our expertise in reverse engineering. (DOI)

EDUCATION

Bachelor of Science in Computer Science,

Colorado State University

May 2024

- Concentration in Networking and Security
- Minor in Mathematics

PAST WORK EXPERIENCE

- Advanced Auto Parts - Retail Parts Pro
- Mod Pizza - All-Star
- King Soopers - Cashier

January 2022 — May 2023
January 2019 — July 2021
November 2017 — October 2018