

## Work Experience

**Amtrak** - Electrical Engineer October 2020 - Present

Currently working on Positive Train Control (PTC), one of the control systems that prevents unsafe train movement. Mostly focusing on the Advanced Civil Speed Enforcement System (ACSES).

Duties include:

- Investigating train operation issues, safety issues, and delays caused by PTC to ensure safe operation and on-time performance.
- Participating in test trains for testing modifications to system hardware and software.
- Design, installation, testing, and day-to-day maintenance of the PTC system equipment onboard locomotives, on the wayside, and in the back-office.
- Working closely on projects and troubleshooting with other NEC railroads, contractors, and vendors.
- Projects include creating a central management server, contributing to a status monitoring tool for one of the wayside devices, using Docker to orchestrate and maintain internal system tools/infrastructure across multiple Linux servers, designing and implementing new radio sites and upgrades to existing sites to improve coverage and performance.

**Amtrak** - Management Trainee June 2019 - October 2020

A member of the Amtrak Management Training Program's fifth cohort. Earned Engineering, Transportation, and Mechanical qualifications.

Worked a Transportation rotation with Amtrak and MARC between Baltimore and Washington DC, and a Mechanical rotation in Sunnyside Yard, NYC. Also worked a long-term placement with the C&S Communications Engineering department.

Duties included:

- Maintained newly installed Eventide voice recorders used to record critical phone and radio channels, trained and supported users.
- Maintained and troubleshot issues that arose in telecom infrastructure in a timely manner.
- Helped with planning and reviewing designs for upgrades to infrastructure at various offices, stations, facilities, and along the Right-of-Way.

**Amtrak** - Engineering Intern May 2018 - June 2019

Worked in the C&S Department on Radio, Networking, Power, and other types of technologies. Also frequently worked in the field with installs, repairs, management, etc. in facilities and locations along the Right-of-Way.

## Volunteer Experience

**Minquas Fire Company No. 2** - Firefighter April 2024 - Present

## Education

**University of Colorado Boulder** June 2021 - March 2024  
Engineering Management Master of Engineering

Completed coursework in: FPGA design, Internet of Things, Finance, Project Management, Product Development, Systems Engineering, etc.

**Temple University** August 2015 - May 2019  
Electrical Engineering Bachelor of Science

Completed coursework in: Electric Circuits, Digital Circuit Design, Processor Systems, Digital Signal Processing, Linear Algebra, C Programming, Embedded Systems Design, Java, Microelectronics, etc.

## Skills

### ACSES/PTC Systems

Back-office, wayside, onboard, radio, RF, communications, troubleshooting

### Railroad Experience

Operations, transportation, NORAC, roadway worker protection, mechanical, blue flag protection, communications, signals, positive train control

### Engineering

Systems engineering, system testing, V&V, technical writing, documentation, SOPs, Visio, CAD

### Systems Administration

Bash, Red Hat, CentOS, Rocky, Debian, Ubuntu, Docker, ESXi, Windows, Linux, web hosting, docker-compose, troubleshooting

### Software Programming

Python, bash, git, data science, R programming, Jupyter notebooks, web development, Java, Javascript, html, css, software testing

## Certifications

### Northeast Operating Rules (NORAC)

Amtrak

### Roadway Worker Protection (RWP)

Amtrak

### Electrical Operating Instructions (AMT-2) Class B and Class C

Amtrak

### Passenger Train Emergency Response (PTER)

Amtrak

### Hazardous Materials Awareness/Operations

PA State Fire Academy / National Pro Board

### Basic Life Support Provider

American Heart Association

### BLS for the Healthcare Provider CPR/AED Adult and Pediatric

Emergency Care & Safety Institute (AAOS)

### Standard First Aid

Emergency Care & Safety Institute (AAOS)

### Bloodborne and Airborne Pathogens

Emergency Care & Safety Institute (AAOS)

### Stop the Bleed

American College of Surgeons Committee on Trauma

### IS-100: Incident Command System

FEMA

### IS-700: National Incident Management System

FEMA

### Amateur Radio Technician

Federal Communications Commission