

# Kevin Thoele

---

Fincastle, Virginia, USA

+1-908-721-6179

kevinthoele6@gmail.com

[www.linkedin.com/in/kevin-thoele-0316741a3](https://www.linkedin.com/in/kevin-thoele-0316741a3)

## Professional Summary

Field-ready technical specialist with 15+ years in telecommunications and network engineering, now focused on applying modern technologies—IoT, AI, remote sensing, embedded systems, and GIS—to historical preservation, field research, and cultural site management. Skilled in building and deploying robust tech in remote or demanding environments.

I bring a rare blend of computer science, infrastructure-level networking, and practical electronics know-how, currently redirected toward work in digital archaeology and site-based innovation. My recent projects range from AI-powered video analysis for wildlife and security, to custom-built weather data collection systems, to renewable-energy-powered remote sensors.

Comfortable both in the lab and in the field—equipped to design, implement, and maintain cutting-edge systems in support of archaeological fieldwork, conservation tech, or immersive site experiences.

## Highlighted Projects

- Remote-Controlled Environmental Monitoring System

Built with Raspberry Pi 5 and Arduino UNO R4 to control stepper motors, monitor environmental conditions, and relay data wirelessly to an OLED display. Researched and implemented MQTT and MATTER protocols for decentralized device communication—key for remote, solar-powered deployments.

- OpenWeather API Integration for Field & Forecast Data

Designed Python tools to pull, store, and visualize historical and real-time weather conditions using SQLite/PostgreSQL and custom Grafana dashboards. Embedded this data in local Home Assistant and Grafana dashboards, useful for field condition tracking and environmental correlation.

- Educational Electronics Toolkit (Prototype)

Created a modular learning tool to demystify basic electronics and microcontroller use—designed to bridge the gap between theory and field utility.

- AI-Monitored Video Streams

Implemented YOLOv8-based object detection for analyzing trail and surveillance camera feeds. Exploring use cases for security, wildlife monitoring, and artifact watch zones in historical locations.

## Experience

- Verizon Wireless — Network Engineer (2005–2020)

### Enterprise Support & Shift Lead

- Lead troubleshooting for critical enterprise clients; designed internal tools to improve ticket resolution speed.
- Created SQL-driven visual dashboards to expose root causes from call and traffic data—tools that informed broader NOC decisions.

### Network Operations & Infrastructure

- Installed, maintained, and upgraded telecom systems in remote and urban areas using fiber, TDM, DWDM, and microwave.
- Prioritized uptime and efficiency, often exceeding 99.999% availability in mission-critical systems.

### Field Implementation & Automation

- Directed implementation of over 100 projects, including 20+ First Office Applications—introducing new hardware/software into live networks.
- Developed Perl automation to streamline site configuration and upgrade processes—reduced task time from hours to seconds.

## Education & Certifications

- Rensselaer Polytechnic Institute (RPI)  
B.S. in Computer Science & Psychology – 2003
- Cisco Certified Network Professional (CCNP) – Since 2003

## Interests

- Archaeological site technology and preservation
- DIY electronics, solar/wind systems, embedded AI
- Creative fabrication (wood/resin/casting)
- Flight (currently training for FAA drone certification)
- Travel and international collaboration