RYAN McFARLAND

Harrisburg, PA • ryanmcf10@gmail.com • linkedin.com/in/ryanmcf10 • www.rmcfar.land

Data and software engineer with 9+ years building web apps, data pipelines, and automation, including statewide election systems, and leading technical teams. Seeking technical roles, remote or in Harrisburg, PA.

EXPERIENCE

Pennsylvania Democratic Coordinated Campaign

Deputy Data Director (Engineering & Infrastructure) | Apr. 2026 – Nov. 2026

- Built and maintained a statewide Django/PostGIS web app for Voter Protection, consolidating voter assistance, poll observer management, and live reporting of ~1,500 Election Day incidents into a single internal platform.
- Developed an auto-assignment tool matching ~3,000 poll observers to ~1,450 priority sites by availability, language, and travel limits, with live coverage-gap views and a Claude assistant suggesting optimizations.
- Built a voter assistance portal pairing hundreds of voters with volunteers for rides and ballot issues.
- Built dbt and BigQuery pipelines to process the state's daily 1M+ row mail-in ballot file, identifying ~12,000 voters for ballot cure and producing an Observable dashboard and reports for internal and partner stakeholders.
- Built an NGP VAN sync, running every 10 minutes, to power a statewide call leaderboard for ~100 organizers, gamifying volunteer recruitment goals and replacing manual exports with live reporting for directors.
- Identified a turf-cutting bottleneck and resolved it with a JavaScript Chrome extension for NGP VAN, auto-selecting precincts, folders, and names for ~7,500 turfs to save ~250 hours and eliminate naming errors.
- Managed a team of 3 technical associates, coaching on code review and software development fundamentals; configured an AI coding harness to increase team velocity while maintaining campaign data standards.

Pennsylvania AFL-CIO

Data Director | Nov. 2022 – Apr. 2026

- Wrote campaign plans across multiple election cycles, setting goals and priorities for 25+ targeted races in 2024, and regularly presented data reports to AFL-CIO leadership and partner organizations.
- Built an internal Django campaign management tool from scratch, replacing abandoned legacy systems and enabling quick onboarding of temporary field staff and volunteers during fast-paced campaign cycles.
- Created a candidate questionnaire and vetting pipeline that processed hundreds of state and federal candidates, automatically generating an endorsement directory and customized campaign literature.
- Modeled competitive districts using precinct-level election returns, census data, and union membership.
- Developed target lists for the Labor-to-Labor union member outreach program across several special elections and the 2024 general, helping defend a 102–101 pro-labor majority in the PA State House.
- Designed and administered trainings for hundreds of staff and volunteers on field tech (MiniVAN, Scale to Win).

Software Developer | Mar. 2019 – Dec. 2020

- Designed a PostgreSQL database of ~30,000 PA local officials for the AFL-CIO's Path to Power program.
- Wrote fuzzy matching scripts to identify union members holding local office for candidate recruitment.

Other Experience

Harrisburg Area Community College | Web Applications Developer | May 2021 – Nov. 2022

General Dynamics Information Technology | Associate Software Engineer | Jan. 2017 – Mar. 2019

TECHNICAL SKILLS

Python • SQL • TypeScript • JavaScript • Node.js • HTML • CSS • Django • React • Tailwind • REST APIs • CI/CD
PostgreSQL • PostGIS • BigQuery • dbt • Looker Studio • Observable • GCP • AWS • Docker • Git • GitHub Actions
NGP VAN VoteBuilder • Action Network • Mobilize • Scale to Win • Twilio • Mailchimp • Claude Code

EDUCATION

University of Pittsburgh | Pittsburgh, PA | Bachelor of Science in Physics, Minor in Mathematics