

Benjamin Kastner

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Summary of Qualifications

Geospatial Data & Software Engineer with 6+ years of experience developing custom, object-oriented Python frameworks and ETL pipelines to produce mission-critical map data for airborne augmented-reality mission management systems. Skilled at evaluating, integrating, and testing large, diverse datasets customized to high-stakes operational environments. Specialist in optimizing data ingestion and storage for airborne mission management systems, with a deep understanding of system performance and hardware-level bottlenecks.

Technical Skills

- **Languages:** Python (OOP), SQL, CartoCSS, Bash/CMD Scripting
- **Geospatial:** PostgreSQL w/ PostGIS, GDAL/OGR, OpenStreetMap (OSM), Tile Servers
- **Data Engineering:** ETL Data Pipelines, Batch Processing, Data Modeling, Quality Assurance
- **Infrastructure & Tools:** Ubuntu Linux, Ansible (Prior Familiarity), Beowulf Clusters (Prior Familiarity), Git/GitHub, Microsoft Windows
- **Soft Skills:** Technical Leadership, Mentorship, Customer Training, Data-Driven Decision Making

Professional Experience

GIS Engineer Lead | September 2025 - Present

SHOTOVER Systems (formerly Churchill Navigation), Boulder, CO

- Spearheaded a "Build vs. Buy" initiative to replace a mediocre dataset, conducting time and resource modeling to evaluate 4 internal sourcing strategies against 5 external vendor solutions.
- Influenced executive decision making (CEO/COO) by presenting data driven cost/benefit analyses and performing technical due diligence, leading to the successful purchase and integration of a data source that improved data accuracy from 76% to 98%.
- Provided technical direction for the GIS team to support business goals.
- Coordinated with application developers to prepare high-quality documentation for use during customer trainings on a new product, providing a seamless customer experience.
- Traveled internationally to train 2 different customers to use proprietary data conversion tools, allowing them to add their own datasets to the aircraft map system.
- Mentored new hires on custom GIS tools and processes, including reviewing pull requests to ensure quality data output.
- Processed country-wide GIS datasets to provide updated map data to law enforcement and military customers worldwide.

GIS Engineer | August 2019 - September 2025

SHOTOVER Systems (formerly Churchill Navigation), Boulder, CO

- Developed custom Python object-oriented framework to easily create customer – specific ETL scripts.
- Converted GIS data from various formats (including ESRI Shapefile, Geodatabase, GeoJSON) into SHOTOVER's proprietary file format.
- Maintained ETL scripts for structured data sources, decreasing manual effort and ensuring reproducibility across projects.
- Wrote generalized Python- and PostgreSQL- based script to convert stacked address points into ranges for optimal display.
- Created custom Slack app to notify the GIS team when data processing jobs stalled, reducing wasted time.
- Wrote Python scripts to process FAA and FCC obstacle and aeronautical chart data every 28 days to maintain data currency
- Integrated airport traffic data from Wikipedia into a global dataset of airports using Python, used to visually prioritize large airports for the best user experience.
- Created custom OpenStreetMap dark theme using CartoCSS to facilitate night operations.
- Configured and maintained on-prem OpenStreetMap tile servers using custom Bash shell scripts to fully automate large-scale raster map data imports to provide customers with full-country raster map coverage.
- Designed and built custom servers optimized for processing multi-terabyte GIS datasets while staying within budget constraints, thereby allocating resources to meet business goals.
- Processed multi-terabyte datasets of aerial imagery and elevation models to support customer missions.
- Performed quality assurance on large datasets after processing to ensure customer satisfaction.

Education

Capstone Certificate - Advanced Geographic Information Systems

University of Wisconsin-Madison

2022

Bachelor of Computer Science

Calvin College (now Calvin University), Grand Rapids, MI

2019

Capstone Project: Constructed an Ubuntu Linux-based Beowulf cluster, utilizing Ansible for automated node deployment, systems orchestration, and environment configuration.

Professional Certifications

FAA Part 107 Remote Pilot Certificate

Federal Aviation Administration

2025