

## Objective

I am a trained engineer with a creative approach to problem solving. During my time working as a civil engineer I was always trying to think outside the box, optimize our existing workflows and learn new technology to make my team and myself more effective. This ambition ultimately took the form of learning to program, leveraging that love of scalable and custom solutions to build out tools internally for traffic analysis and automate the highway design process through parametric modeling projects. This passion for innovation and learning has carried with me as I transitioned to the geospatial world through Nearmap, working under various titles and teams. In my free time outside of work I stay heavily engaged with personal projects and initiatives leveraging as much as possible recent developments in AI and LLM technologies.

## Work History

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Strategic Account Manager	Nearmap	Mar. 2024 to Current
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- Responsible for managing **\$1.3 million** dollar quota representing the top 60 engineering and telecommunication firms in the US.
- Closed the largest enterprise engineering contract at the company with an increase of **\$570,000** in annual revenue.

Solution Architect	Nearmap	Aug. 2022 to Mar. 2024
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- Provided enterprise solutions across multiple verticals, including AEC, utilities, insurance, and solar.
- Developed a variety of web applications leveraging **Javascript** and **NodeJS** to build out internal support applications, demo gallery applications and other external client facing tools for processing company data via API more effectively.
- Created Nearmap's first SDK for data download of imagery, 3D, and AI content, enabling asynchronous delivery for fast tile downloads and unit testing for seamless CI/CD integration all written in **Python**
- Delivered AI vector datasets for the insurance vertical, specifically tailored for large-scale parcel-level analysis. Processing done via work in **AWS EC2 Instances**
- Conducted general API prototyping using **Flask** and **FastAPI**, primarily for use with JavaScript front-end services.

Solutions Engineer	Nearmap	Jan. 2021 to Aug. 2022
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- Technology resource assisting Strategic Account Manager on closing of a **\$1.4 Million** dollar imagery partner contract for major tech player. Delivery required custom **Python** support to handle nation wide footprint delivery.
- Made significant contributions to leverage industry knowledge to build out the AEC value proposition and marketing strategy.
- Created industry-specific demonstrations leveraging company data built on various platforms like **Esri, Autodesk, Bentley, Openlayers, Mapbox**, and others.
- Took responsibility for proving product value, closing new business, up-selling current clients, and negotiating large enterprise agreements from a technical perspective.
- Developed workflows to improve internal processes, including coverage analysis scripting, raster content vectorization, and full-stack content delivery.

Civil/Highway Engineer EIT	HDR	Sept. 2018 to Jan. 2021
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- NYSDOT Kew Gardens Interchange Phase 4 Design Build Work Zone Traffic Control Team. Developed detailed staging layouts for a complex 5-stage interchange reconstruction project over a 3 year construction period.
- Project contributor involved with drainage team for high profile **\$3.3 billion** dollar Hampton Roads Bridge Tunnel project.

- Responsible for building out traffic analysis database in **PostgreSQL** along with coding initial **Python** processing queries to run analysis on existing traffic route data for recommendations to TXDOT.

#### Civil/Highway Engineer EIT

**HW Lochner**

**Jan. 2016 to Sept. 2018**

- Designed horizontal and vertical geometry for proposed roadways. Geometry was matched with design of proposed super elevation for traveled way and always made an effort to take into consideration design standards outlined by the DOT
- Established temporary staging for use during the construction phase in the form of pavement markings and temporary barrier layouts.

#### Education

**Storrs, CT**

**University of Connecticut**

**2012 - 2016**

- B.S.E. in Civil Engineering - 2016
- **Udemy Complete Python Bootcamp - 2020:** Self-Taught coding classes in an effort to leverage Python processing scripts for use in my field.
- **Udemy Python for Data Science Bootcamp - 2020:** Additional learning to further develop data processing and machine learning modeling techniques.

#### Technical Experience

##### Projects

- **Solution Engineering ChatGPT Assistant** (2023) Full stack application supporting user authentication, document upload, embedding, and storage. Built upon OpenAI API which sourced user queries along with reference materials as a digital replacement for the SE team. AWS Lambda, Supabase, Nodejs, Express.
- **Orthoimagery Download Full Stack Application for Enterprise** (2022). Application to support large area imagery download, built in Python with PyQt front end and Pymongo database for authentication and usage tracking for billing purposes.
- **Powerline Vectorization Algorithm** (2023) Machine learning based algorithm in order to better server vector content to Telecommunication industry prospects. Python code would read in variety of vector data to attempt to accurately reconstruct line networks.
- **Roadway Best-Fit AI KNN Model** (2020). Leverage Scikit Learn to run a horizontal classification model on roadway center-line point data for use in parametric roadway modeling while working as a civil engineer.