Silas Frantz

GIS Developer

P 804-938-3802 E silas.frantz@gmail.com H San Luis Obispo, CA W LinkedIn | GitHub

SUMMARY

Geospatial programmer and systems lead with a background in data science and applied math. Five years' professional experience developing applications to support utility-scale renewable energy prospecting and siting analysis. Motivated to empower others and shape the future.

EXPERIENCE

Apex Clean Energy
GIS Developer
Jan 2019 – Present
GIS Analyst
Oct 2017 – Dec 2018
GIS Analyst Intern
June – Sept 2017

- Lead national geospatial systems and data engineering
- Develop GIS apps and tools within ESRI / open-source software
- Prototype automated site evaluation / machine learning models
- Build and maintain analysis API platform (ArcGIS Portal, Flask)
- Automate database management and alerts (SQL, MongoDB)
- Provide technical guidance on connecting disparate org systems
- Mentor GIS (and Non-GIS) Analysts and Developers

University of Virginia
Instructor / GIS Technician
Oct 2016 – May 2017

- Taught Hydrology 101 as lead instructor
- Worked as teaching assistant for Fisheries / Sustainability
- Georeferenced and digitized historic street maps using ArcGIS

CA Fish & Wildlife
Fisheries Technician
June – Sept 2016

- Collected data for state-funded biological monitoring programs
- Operated land survey equipment in coastal redwood streams
- Synthesized and cleaned 3D data via custom ArcGIS extension

PROJECTS

I love working on side-projects that connect data science and app development.

While my professional projects tend toward concise, performant solutions, my personal projects allow me to dive deeper creatively. Two of my favorites are…

(1) **track cat** **–** fixes GPS watch error from 400m track runs, parsing Garmin .FIT files using the Java SDK, then running a clustering algorithm over the point stream to inference a track oval and "snap" GPS points to their corrected locations

(2) **portrait by number** **–** produces labeled contour and colormap images from any input photo, running a chain of neural nets to find facial features, then clustering to imitate human vision via a series of OpenCV operations and color-space transforms

ATHLETICS

- HOKA Aggies Running Club Olympic Development Athlete
- Official pacesetter for Keira D'Amato American Record Marathon (2022)
- Collegiate 10K Road Racing National Champion (2016)
- Competed NCAA DI for Georgetown (2011-2015) and University of Virginia (2015)
- VA Track State Champion & Foot Locker Cross Country Nationals Finalist (2010)

EDUCATION

MASTERS
Environmental Sciences | GIS
University of Virginia '17
Charlottesville, VA

BACHELORS
Physics | Science, Technology & International Affairs
Georgetown University '15
Washington, DC

SKILLS

- Python
- JavaScript / CSS / HTML
- SQL Server / PostgreSQL
- ArcGIS / ESRI Suite
- GeoPandas / Shapely / PyProj
- RasterIO / GDAL
- TensorFlow / PyTorch
- SciKit-Learn / OpenCV
- MongoDB / JSON / XML
- Flask / Jinja
- Visual Studio Code / Jupyter
- Windows (IIS) / Linux / Azure
- PowerShell / Bash
- Airflow / Tasks / ETL
- GIS Analysis
- Geospatial big data
- Deep learning
- Aerial imagery segmentation
- GitHub Version Control
- Object-oriented programming
- API Development
- Web scraping
- Statistical modeling
- Fluent in German (Native)
- Proficient in Spanish

AWARDS

- Apex Clean Energy Emerging Leader Nominee (2022)
- Apex Clean Energy Presidential Award for Sustainability (2020)

HOBBIES

- Surfing, diving, soccer, guitar