

# Gail Hobbs

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[LinkedIn](#) | [Soft Skills](#)

## GEOSPATIAL DEVELOPER

Developer in service of an environmentally-informed public, creating tools improving and empowering access to data attached to sustainability initiatives. Building at varied organizational levels internationally, my experience ranges from a United Nations office, to a remote startup, to local government. Proficient in Python, GIS, React, SQLAlchemy/ORMs, Docker, Azure. 3+ years of technical experience with frontend and backend development of web applications, 1 year of experience with Python for geospatial data processing, all working with dynamic teams on modern technical challenges.

## TECHNICAL SKILLS

<b>Languages</b>	Python • TypeScript • JavaScript • HTML5 • CSS • PHP • C# • C / C++ • Java • R • Matlab
<b>Frameworks</b>	Flask • Django • Node.js • React • Redux • Recoil
<b>Databases</b>	PostgreSQL • SQL Server • SQLite • Oracle • Power BI • Excel
<b>Libraries</b>	ArcGIS REST APIs • PyTest • pandas • TensorFlow • scikit-learn • SQLAlchemy • Selenium
<b>Infrastructure</b>	Docker • Azure • Google Cloud Platform

## EXPERIENCE

**GIS Application Developer, Arizona Department of Water Resources** Phoenix, Arizona • 1/2024 – Present

- Spearheaded development and deployment of seven [new GIS applications](#) in six months, importantly utilized by the state of Arizona for data on water rights, ground and surface water, recharge and recovery, and well registries. TypeScript + ArcGIS Experience Builder, Docker, Express.js
- Automated geospatial analysis workflows for water resource specialists with Python. ArcPy + cx-Oracle
- Publicized software development patterns and resources to fellow developer professionals at [GIS forum on Arizona's water supply](#) as a lead developer resource on Experience Builder Developer Edition for the state.

**Frontend/React Developer, GBCS Group** San Francisco, California • Remote • 5/2023 – 8/2023

- Enhanced, reviewed, and maintained code for the [GBCS Group website](#) and [Aukai](#) platform, handling marine fleet management (commercial ships and vessels) to support tracking of emission targets and repairs. TypeScript + Azure
- Collaborated in project management to oversee execution of project quality, cost, software maintenance, direction

**IT Software Engineer, International Atomic Energy Agency** UN Office, Vienna, Austria • 9/2021 – 8/2022

- Led rapid prototyping + built proof-of-concepts for web application development, tested feasibility/scalability of new software using React.js, .NET, SQL, Jupyter notebooks, CKAN (open source data management system) to advance clientele's innovation objectives
- Developed and deployed scalable applications with Azure using CI/CD and managed frontend work on apps for timely product delivery
- Strengthened Power BI reporting and database management on SQL Server for emergency reporting services

**Data Science Research Intern, Qualcomm Institute at UCSD** UC San Diego • 9/2019 – 3/2020

- Disseminated research on machine learning model creation for impact measurement on NGO environmental initiatives
- Presented analytics on map with Python + pandas to formalize NGO impacts in developing countries by gender

## TECHNICAL PROJECTS

**Arizona Department of Water Resources' GIS Applications** - [Well Registry](#) | [Community Water Systems](#) | [AAWS](#) | [GFR](#)  
Development lead on GIS applications built with TypeScript frontend and Node.js REST API for agency-specific workflows.

**Cesium Development for IAEA Data Platform** - [Site](#) | [Demo](#)

Full-stack application developed for testing integration with International Atomic Energy Agency's data platform API.

- Implemented functionality for viewing platform-connected data on top of additional marine layer data with React + CKAN for data queries, deployment and YAML pipeline via Azure

**Temperature Anomalies Visualizer** - [GitHub](#) | [Demo](#)

GUI application visualizing + animating 2°×2° grid temperature anomalies on country capitals with NASA data, 1880-2023.

- Mastered QT and Folium-Leaflet library in two days time in order to utilize GUI and map tools in application

## EDUCATION

Mathematics-Scientific Computation, Bachelor of Science, BS, University of California, San Diego, 2020  
Software Engineering, Flatiron School, 2023