

Graham Joss

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Professional Statement

Budding technology professional with a strong foundation in software development, data science, and geographic information systems (GIS). Eager to tackle complex problems through algorithmic thinking and intellectual rigor. Proven ability to clean, analyze, and visualize data while promoting clear communication for effective team collaboration. Seeking to leverage recent hands-on experience in AI-driven information extraction, multi-threaded API development, and automation scripting to contribute to innovative projects in a dynamic environment.

Skills

- Algorithmic Thinking & Programming Languages: C, Java, Python, JavaScript, Dart
- Optimization & Scripting: Vim Script (mappings, macros, functions), Shell Scripting (Bash, Zsh, Awk, Perl)
- Data Visualization & GIS: GeoPandas, Leaflet, Folium; ESRI ArcGIS Suite (Pro, Online, Map)
- Big Data & Cloud: Map-Reduce paradigm using AWS; Back-end hosting (AWS, Firebase, Supabase)
- Databases & Querying: Structured Query Language (SQL), Regular Expressions
- Technical Writing: Clear explanations of technical and non-technical work
- Version Control & Tools: Git, Jupyter Notebook
- Frameworks & Libraries: Django, Flutter, Pandas, NumPy
- AI & ML: Vision Language Models (e.g., Donut for OCR-free extraction), Multi-threaded API pipelines
- Other: Note-taking (Obsidian), Automation & Scheduling (e.g., launchctl)

Work Experience

AI Intern & Business Development at LocusView (GIS Software Company), Chicago, IL, March 2025 – August 2025

- Developed a multi-threaded Python API pipeline for large-scale data retrieval, optimizing for rate limits and reducing latency by 50% while handling batch operations for efficient content migration.
- Researched and implemented vision language models (VLMs) for an information extraction pipeline, focusing on processing multi-page PDFs to extract attributes like manufacturer details and serial numbers for utility equipment.
- Devised and executed a plan to migrate company training materials to an internal Google Site, improving accessibility, reducing hosting costs, and enhancing collaboration for distributed teams.

Data Science Intern at Chicago Metropolitan Data Science Corps (FracTracker Alliance), Chicago, IL, July 2024 – September 2024

- Cleaned and structured a medium-sized spreadsheet of unstructured data using Python's Pandas, reducing processing time by 40% and providing recommendations for future data collection in novel scenarios.
- Developed a multi-threaded Python script for API calls, minimizing network latency while adhering to rate limits, and implemented scheduled tasks to efficiently update data files by processing only new entries.
- Created a comprehensive data report summarizing exploratory data analysis (EDA) insights and designed interactive geographic maps with ArcGIS Online to visualize spatial trends for stakeholders.

Geographical Information Systems Lab Assistant at DePaul University, Chicago, IL, September 2023 – November 2023

- Transformed, analyzed, and visualized geospatial data using ESRI's ArcGIS Pro, supporting graduate and undergraduate courses in cartography and statistics.
- Tutored students on geospatial data handling, improving lab session efficiency and student comprehension through hands-on demonstrations.

Teacher Assistant for Spatial Data Science class at DePaul University, Chicago, IL

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September 2022 – November 2022

- Utilized Python's open-source geographic libraries (e.g., GeoPandas) in Jupyter Notebooks for exploratory spatial analysis, including spatial clustering and geocoding.
- Conducted tutoring sessions on reproducible workflows, enabling students to build scalable data science projects.

Teacher Assistant for Remote Sensing at DePaul University, Chicago, IL, January 2021 – March 2021

- Analyzed Landsat data using ESRI's ArcMap, focusing on change detection, spectral, and thermal analysis.
- Provided course tutoring to enhance student understanding of remote sensing techniques and applications.

Sales Administrator at R.R. Donnelley, Chicago, IL, August 2015 – November 2019

- Conducted market research to support sales processes and designed innovative paper fold concepts for direct mail campaigns.
- Strategized multi-channel customer engagement (e.g., email and physical mail) to boost shopping cart conversions and customer loyalty, resulting in improved campaign performance metrics.

Education

DePaul University, Chicago, IL, Bachelor of Science in Computer Science – Software Development
Certificate in Geographic Information Systems

Graduation: May 2024

Certifications

Dale Carnegie Course, December 2024

- Leadership training emphasizing communication, organizational development, and interpersonal skills.

Volunteer

Mentor – Mentor Collective, January 2024 – August 2024

- Mentored junior college students transitioning to universities in computer science, offering guidance on attitude, work ethic, and practical skills for success in competitive academic settings.

Projects

Weather Application – Django (Python) Web App (Senior Capstone Project)

- Created a full-stack web application for weather data retrieval and display, integrating APIs for real-time updates and user-friendly interfaces. Link to project: [here](#)

GitHub Repository Scraper – Zsh Terminal Application

- Designed evolving shell scripts (Zsh, Bash, Awk, Perl) to scrape and display GitHub user repositories, including file exploration and downloads via curl and regex parsing.
- Iteratively improved functionality for deeper repository traversal and error handling, showcasing automation and scripting expertise. Link to project: [here](#)

Educational Non-Profit Visualization – ArcGIS Map Journal

- Visualized class offerings against census data to highlight community impact, using interactive maps for stakeholder insights. Link to project: [here](#)