Thomas Plazek

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EDUCATION

University of Pittsburgh, Pittsburgh, PA
B.S. in Environmental Science | Certificate in Geographic Information Systems **GPA - 3.5/4.0** **May 2023**
Concentrations: Geographic Information Systems
Relevant Coursework: Geographic Information Systems (Years 1 & 2), Remote sensing, GPS and Computer Methods, Surface water hydrology, Advanced geomorphology, GIS independent study, Historical GIS design internship

EXPERIENCE

Latitude AI - Data Services Analyst II (GIS Analyst), Pittsburgh, PA **May 2025 - Present**
- Digitizing, modeling and simulation of both 2D and 3D polylines and lane features for use in Latitudes' unified L3 AV models in ESRI and internal tools.
- Maintain and improve GIS data quality, including advanced geoprocessing and spatial analysis. Build and QA maps for testing and deployment, applying ArcGIS Pro and internal tools.
- Giving feedback, doing quality control and partial development to help engineering teams create and beta-test new tools and tooling features.

Plazek Properties - Property Manager, Pittsburgh, PA **Feb 2024 - Mar 2025**
- Managed property parcels using ArcGIS Parcel Fabric for 2D layouts and lot management.
- Coordinated utility data, renovations, and tenant relations, producing regular reports.

Maxar Technologies - GIS Analyst (contract), Remote **Jun 2023 - Jan 2024**
- Supported the Human Landscape Project, analyzing global imagery (China, Israel, Palestine).
- Applied ArcGIS Pro/ArcMap for geodatabase design, data cleaning, anomaly detection, and metadata editing, and automated workflows with ArcPy and developed custom ArcGIS Pro tools.
- Produced NGA-standard outputs and ensured quality control for spatial deliverables and collaborated with a distributed team to ensure timely, accurate geospatial outputs.

ACADEMIC PROJECTS

Built a geospatial research project on environmental and social impacts of the Korean War **Aug 2024 - Dec 2024**
- Hosted and managed a WordPress site to log progress and updates to the project
- Digitized paper maps using QGIS; Used control points to accurately project the digitized maps
- Worked with QGIS as an open-source alternative to the ESRI Suite and improved research skills by locating difficult-to-find information

Amazon Rainforest River Migration Study **Jan 2023 - May 2023**
- Assisted Dr. Elad Dente and his team with their research paper using ArcGIS Pro, as well as Google Earth Engine to analyze changes in river centerlines
- Utilized raster and vector analysis to understand river dynamics, with continuous outputs fed into a deep-learning model
- Created and updated unique point and polygon feature classes containing manually located errors (i.e., river centerline mapping errors and river deforestation) from automatic mapping
- Used ArcGIS outputs to mask errors in a Google Earth Engine model
- Created statistical layers and predictive surfaces within ArcGIS Pro regarding the likelihood of certain types of errors

Creating an extensive geodatabase documenting the 'Comfort women' war crimes of the Japanese Imperial Empire **Jul 2024 - May 2025**
- Using both ArcGIS Pro and QGIS to georeference and digitize paper maps documenting the locations of camps and human trafficking routes
- Creating geodatabases for each type of location based on the kind of testimony that was given (i.e., survivor testimony; Japanese soldier accounts; Official government documents)
- Spatially joining digitized data to publicly available Admin shapefiles and creating visuals, maps, and layouts in ArcGIS for the different locations based on testimonies
- Writing and attaching metadata to each attribute table and geodatabase
- Creating buffer layers and statistically calculating approximate locations based on digitized imagery to account for the resolution discrepancies
- Working with South Korean professors to utilize this data for public access and academic work moving forward

SKILLS

Programming: R, Python, Jupiter Notebooks
Software and Tools: ESRI Suite, QGIS, Google Earth Pro, Google Earth, ENVI, ArcGIS model builder, custom Arc toolboxes
Language: Native in English; Conversational in Korean