# Hitomi Nakamura

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Portfolio - https://nakam031.github.io/portfolio/

## EXPERIENCE

**GIS Specialist, SWCA (Nov 2019 – Present)**
- Develop custom tools using Python to automate the process and improve the existing workflow
- Develop a workflow and tool to calculate viewshed volume which is required from Fish and Wildlife Services
- Create and edit custom maps for both cultural resources and natural resources teams using ArcPro 2.4
- Apply statistical knowledge to produce both spatial and non-spatial datasets
- Host spatial datasets on ArcGIS Online and create web application

**Geospatial Support Assistant, Polar Geospatial Center (Oct 2016 – Nov 2019)**
- Serve as a consulting point-of-contact for over 40 NSF or NASA funded scientists via phone/email
- Use ESRI ArcMap, ArcPro, QGIS, and Global Mapper for both vector and raster data management, production, processing, editing, and spatial analysis
- Develop Python scripts to automate the process and improve the existing workflow
- Produce publishable cartographic-quality maps utilizing ArcGIS and Adobe Illustrator
- Update existing technical documentation for various workflows
- Transfer data using File Transfer Protocol (FTP)
- Create, edit, and process tables and data using Excel, Google Spreadsheet, and PostgreSQL
- Apply statistical knowledge to produce both spatial and non-spatial datasets
- Delivered over 200 customized products including orthorectified satellite images, maps, and DEMs to scientists. ArcGIS, Python scripts, OSGeo, Adobe CC, Global Mapper, SQL, Microsoft Excel, Google Earth were utilized to accomplish the tasks
- Georeferenced over 80 historical maps and cataloged them using ArcMap, ArcGIS Server, and the database
- Digitized fast ice in Antarctica for a seal habitat study. Utilized Python and ArcPy to produce an RGB raster mosaic of Landsat7, MODIS, and DigitalGlobe images

**Cartographic Assistant / Technician, University of Minnesota - Duluth (Sep 2015 - Dec 2015)**
- Utilized ArcMap to geocode points of interest
- Designed maps for several publications by using both the ArcGIS edit and representation tool, and Adobe Illustrator

**GIS Intern, Facilities of Management - City of Duluth (Jun 2015 - Aug 2015)**
- Created maps such as the Trail system navigation map and Tax forfeit property map using ArcGIS & Google Earth
- Developed a downtown Duluth utility distribution web map utilizing ArcMap and ArcGIS Online
- Attended business meetings and educated non-GIS professionals on how to visualize problems in maps

**Organizer and Presenter, University of Minnesota - Duluth & University of Wisconsin - Superior (Sep 2015 - Dec 2015)**
- Produced a story map using ArcGIS Online as a presentation material
- Conducted an interview with the Secretary General of Japan Confederation of A- and H-bomb Sufferers Organization, and created a short interview video as a message to the people in the U.S.

## EDUCATION
**Master of Geographic Information Science,** Minor in **Management of Technology -** University of Minnesota (May 2019)
**B.A Geographic Information Science**, Minor in **Geography -** University of Minnesota Duluth (December 2015)

## SKILLS
**Technology & Software:** ArcGIS Desktop 10.6, ArcGIS Pro 2.3, ArcGIS Server, ArcGIS Online, Web App Builder, Dashboards, StoryMaps, Collector for ArcGIS, QGIS, Google Earth Pro, Adobe Creative Cloud, Microsoft Office, Auto CAD, CADD, GitHub, OpenStreetMap, Global Mapper, Carto, PostgreSQL, PostGIS

**Programming:** Python, JavaScript, HTML5, CSS3, Arcade, ArcPy, SQL, Bootstrap, jQuery, NodeJS, ExpressJS, R, Command-Line Interface, ArcGIS API for JavaScript

**Professional Skills:** Data and Database creation, data processing, database management, web development, publishing and managing hosted services, creating and managing web maps, remote sensing, data collection using GPS and Collector App, cartography, spatial analysis, spatial thinking, troubleshooting, map production, presentation material creation, cross-cultural and cross-functional communication, multitasking, project management, team leading, Japanese

## PARTICIPATION
**Esri UC Student Assistant** (Jul 2018)
- Selected as a Student Assistant at the Esri UC to assist the UC with operations such as set up, registration, monitoring sessions, cashier and cleaning

**MN GIS/LIS Consortium Poster Presentation** (Oct 2017)
- Presented a poster that introduced the Great East Japan Earthquake at the 2017 MN GIS/LIS Consortium

**Humanitarian Crisis Simulation Camp** (Sep 2016)
- Interacted with several mock humanitarian-aid groups to collect data and deliver spatial and non-spatial information for supporting relief efforts

**North American Cartographic Information Society (NACIS) Annual Meeting Co-Presenter** (Oct 2015)
- Co-presented the usage of interactive online maps (ArcGIS Online's story map) for educational purposes at NACIS. Presented several story maps created during the study abroad program in Belize

**Mapping in Belize Program (Study Abroad),** May 2015
- Investigated deforestation, urbanization, agricultural practices and hurricane impacts using GPS data and satellite imagery
- Created story maps using ArcGIS Online to introduce wildfire impact in Belize

## COURSES
**ArcGIS I / ArcGIS II** (ArcMap, ArcPro, ArcGIS Online, ArcPy, Arcade)
**Web GIS & Services** (JavaScript, OSM, Carto, REST, Mapbox, ArcGIS API, AWS, ArcGIS Server, PostgreSQL, PostGIS)
**Advanced Web Design** (HTML, CSS, JavaScript, GitHub, Adobe CC, Typography)
**Statistical Analysis** (Excel, R)
**Spatial Database Design** (PostgreSQL, PostGIS, ArcGIS Server, QGIS, GitHub, AWS, Command-line Interface (CLI))
**Advanced Geo-computing** (Python, numPy, Pandas, GDAL, ArcPy, CLI, OSGeo)
**Web Developer Boot Camp** (HTML, CSS, Bootstrap, JavaScript, jQuery, NodeJS, ExpressJS, JSON, MongoDB, GitHub, SQL, API, CLI)

# PROJECT EXAMPLES

**Viewshed Volume Calculation Tool**

Using Python and Arcpy, I created a custom tool that calculates the viewshed volume of the cylinders.

**Minnesota Place Names in Antarctica**

Using PGC's Antarctica place name database, ArcGIS, and Adobe Illustrator I produced a map that depicts Minnesota contributions to the Antarctic Science. The project was originally requested by the President Emeritus of the University of Texas at Dallas to the Dean of the University of Minnesota.

**Spatial Temporal Pattern Web Map**

Using Python, PostgreSQL, PostGIS, QGIS, ArcGIS Desktop, ArcGIS Server, and Web App Builder, I created animated web maps to show the spatial temporal pattern of the public transportation in the Twin Cities, MN. All Passenger Counter (APC) data from April and September 2017 was used to conduct the analysis.

**ArcticDEM Demo Website**

Using the ArcGIS Desktop, ArcGIS API for JavaScript, and ArcGIS Server, I created web maps to show the wildfire damage in the Northwest Territories, Canada. Then, I developed a website to introduce the usage of PGC's ArcticDEM product. Web maps are published and hosted using ArcGIS Server.

**Poster And Website Creation**

Using ArcGIS Desktop and Adobe Creative Suites, I produced a poster to introduce the Great East Japan Earthquake. Once the poster was created, data was migrated to the website using ArcGIS Online, HTML, CSS, and JavaScript.

**Change Detection of Area Hit by Tsunami by Using Object Based Image Analysis (OBIA) Method**

Using the high-resolution images from DigitalGlobe Foundation and OBIA method, I conducted a change detection research of Iwaki, Fukushima, Japan where it got affected by the Great East Japan Earthquake.

**Summary Statistics with Multiple Case Fields Tool**

Using Python and ArcPy, I created a custom tool that calculates summary statistics with multiple case fields. Input is point data and the tool can output multiple summary statistics, such as mean center and median center.

**Spatial Database Analysis and Visualization of Wildfire in Nevada**

Using PostgreSQL, PostGIS, and QGIS, I conducted an analysis of wildfire damage in Nevada from 2000 to 2016. Maps were created to visualize the impact to the residents and infrastructure caused by wildfire.

**Esri Story Maps of Belize**

Using ArcGIS desktop and ArcGIS online, I developed an interactive story maps of wildfire distribution in Belize. Downloaded the wildfire data from MODIS and settlement distribution data from biological-diversity.info.

**Maps for Publication**

Using ArcGIS Geocoding tool, edit tool, and representation tool, I produced a map for UMD faculty's publication. Used Adobe Illustrator for detailed cartography.


*Please Check My Portfolio for Examples*