Juliette Gale | GIS Specialist

SUMMARY

Geographic Information Systems Specialist experienced in GIS data maintenance, and GIS analysis using ArcGIS products.

CONTACT

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in Juliette Gale

SKILLS

- ArcGIS and ESRI Products (Pro, Online, StoryMaps)
- TerrSet / IDRISI
- Spatial Database Management
- Data Entry
- Microsoft Office Suite
- Google Earth Engine
- Fieldwork & Data Retrieval
- JavaScript, Python
- Public Speaking
- Teamwork
- Creative Problem Solving

ORGANIZATIONS

- Gamma Theta Upsilon Honor Society
- American Association of Geographers

EXPERIENCE

Graduate Remote Sensing Research Assistant

Clark Labs | Worcester, MA | June 2020 - Present

- Conduct GIS analysis using remotely sensed data in TerrSet software
- Currently working on Global Landcover Change Forecast project funded by ESRI

GIS Support Assistant

Clark University | Worcester, MA | August 2019 - Present

- Provides free, one-on-one tutoring and guidance to students seeking assistant in GIS programs and applications—ArcGIS, TerrSet
- Additional office assistant roles including intra-departmental projects and communication, and office management

Human Environment Regional Observatory Research Fellow

Clark University | Worcester, MA | June 2019 – June 2020

- Competitive research group within Geography program; Research centered on urban tree survivorship in Massachusetts Greening the Gateway Cities Program in Leominster and Pittsfield MA
- Collected data during summer fieldwork–tree health survey, stakeholder interviews; Worked with data provided by Massachusetts DCR, MassGIS data, and American Community Survey data; Analysis conducted in ArcGIS Pro
- Presented research to stakeholders—MA DCR, city foresters, community members and NGOs; Summer research became basis for Senior Honors Thesis

EDUCATION

Clark University | Worcester, MA

Master of Science in Geographic Information Science

August 2019 – Expected June 2021

- Accelerated Degree Program - Full merit scholarship
- Studying Geographic Information Systems (GIS) and multiple programming languages
- Working on various GIS projects including land change modeling, temperature mapping

Bachelor of Arts in Geography and Global Environmental Studies

August 2016 - June 2020

- GPA: 3.80 - summa cum laude
- Awarded Highest Honors in Geography for Honors Thesis
- Specialization in Earth System Science for Geography; Specialization in Political Ecology for Global Environmental Studies

PROJECTS

Stewardship and Survivorship: Residential Tree Health in Four Massachusetts Gateway Cities

Senior Honors Thesis

Mixed-methods study aims to understand what residential tree stewardship motivations and practices influence tree health in Leominster, Pittsfield, Chicopee, and Fall River. Uses tree point data provided by Mass DCR, joined with tree survey and interview data from HERO fellowship. Spatial hot spot analysis conducted in ArcGIS Pro showing spatial clustering of tree health.

Greening the Gateway Cities Stakeholder Presentation

Human Environment Regional Observatory (HERO) Summer Research

Research involved analysis of tree survey and interview data, including running summary statistics of tree health, interviewee demographics, and analysis of tree steward networks. Developed maps and figures of study areas and tree surveys.

Hadwen Arboretum Land Management Plan & Stakeholder Presentation

Urban Forestry

Part of first cohort dedicated to restoring Clark University's Hadwen Arboretum. Helped produce first land management plan, including researching land history, establishing land management protocols, producing canopy coverage maps for the City of Worcester.

Hadwen Arboretum StoryMap

Arboretum Research Directed Study

Final independent project; Created an interactive StoryMap on ArcGIS Online to provide an informational web-resource for the Arboretum. Includes land history, interactive maps of walking trails and tree species, and information about wildlife. This StoryMap can be found here on ArcGIS Online.

Landcover Classification of Burncoat Pond Sanctuary

Intro to Remote Sensing

Final project involved downloading and manipulating Sentinal-2A imagery from USGS EarthExplorer to create land cover classifications for the area surrounding Mass Audubon's Burncoat Pond Wildlife Sanctuary. Analysis included making buffer zones for analysis in ArcGIS Pro and exporting data for raster analysis and classification in TerrSet software. Project culminated in ArcGIS Storymap; involved exporting satellite data to ArcGIS Online.

Hot Spot Analysis of Urban Tree Health in Massachusetts

Advanced Vector GIS

Final project expanded upon thesis research, conducting cluster-outlier analysis on tree health in Leominster, Pittsfield, Chicopee, and Fall River. Project additionally analyzed spatial distribution of building age in study cities, using tax parcel data obtained from MassGIS Online.

Street Tree Inventory of Downtown Worcester, MA

Landscape Ecology, consulting for The Worcester Tree Initiative

Conducted tree survey in Downtown Worcester for The Worcester Tree Initiative at Tower Hill Botanical Garden. Survey involved GPS point collection of street trees, species identification, and recording health metrics. Project involved importing GPS points, data entry, and cleaning raw data. Produced maps displaying tree location and species, and produced energy benefit report using i-Tree Eco Software.