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# **EDUCATION**

### **OREGON STATE UNIVERSITY | Cum Laude**

June 2022

- Bachelor of Science, Geography and Geospatial Science
- Minor, Computer Science
- Certificate, Geographic Information Science (GIS)

### EXPERIENCE

# WILDFIRE AND WATER QUALITY ANALYST | Internship

Spring 2022 - Present

# Oregon Health Authority, Public Health Division, Drinking Water Services | Eugene, OR

- Standardized and aggregated volatile organic compound detection data for over 1,700 sample locations in 23 public water systems impacted by the 2020 wildfires in Oregon.
- Organized cross agency and cross institution collaboration and data sharing efforts to develop a complete picture of the impacts of the 2020 wildfires on Oregon's public water systems.
- Built a Microsoft Access database to facilitate efficient data sharing and automated report generation.

# **OREGON DEPARTMENT OF HUMAN SERVICES | Salem, OR**

# **Project Intern | Internship**

Fall 2021 - Spring 2022

# Office of Research, Reporting, Analytics, and Implementation

- Made recommendations and built products to facilitate the incorporation of geospatial data and GIS workflows into statewide longitudinal dataset development projects.
- Compiled and presented potential geospatial data contributions for ongoing projects to Directors and Deputy Directors of collaborating State agencies.

# Operations Specialist | Internship

**Summer 2021** 

### Office of Resilience and Emergency Management

- Built an end-to-end case management system to track and resettle survivors of disasters in Oregon.
- Situation Unit Leader for the Office of Resilience and Emergency Management Oregon Wildfires Taskforce for the 2021 fire season.
- Provided GIS support for the Emergency Management Unit and compiled daily SITREPS for over 350 people and departments across Oregon state government.

### **PROJECTS**

# Assembly Area Selection and Critical Bridge Identification in Coos County, Oregon

2020

- Expanded on previous work done by DOGAMI to identify hazard, critical bridge, and assembly locations, focusing on the interior of the county not covered by previous analyses.
- Identified 7 new assembly areas and 17 new critical bridges in the interior population centers of the county, increasing the number of people served by over 8,000.
- Made recommendations for outfitting assembly areas with emergency supplies.

#### Site Report and Management Plan – East Hill Farm Site, Corvallis OR

2021

- Collected and compiled spatial and other data about the site, including locations of existing infrastructure and trails, hazards, important species, and demography for surrounding areas.
- Made management recommendations and developed locations for new infrastructure, including an additional parking area, 6 interpretive signs, and 2 miles of new trails.
- Emphasized the role of public education surrounding invasive and native species to meet landowner and stakeholder management goals.

# **Oregon Protected Area Land Cover Change**

2021

• Examined land cover change on GAP Status 1 and 2 protected areas in Oregon over 25-year period using LCMap Land Cover Change raster data for years 1990-2015 and GAP-US protected area polygons.

Developed automated raster clipping workflow using Python to reduce manual processing time and speed up analysis.

# **Cascadia Subduction Zone Event Annotated Bibliography**

2021

- Conducted a literature review of the government documents, media pieces, and lines of effort at both the state and federal level to understand the impacts that the CSZE will have on Oregon.
- Emphasized the human element of the CSZE by comparing it to the 2011 earthquake and subsequent tsunami in Japan.

Wildfire in Oregon 2022

- Examined the impact of Anthropogenic Climate Change and forest management practices over the last century on wildfire intensity, severity, and frequency in Oregon.
- Conducted a literature review and developed 2 interactive maps to explore the impact of wildfire on human health and the built environment - especially with respect to differences in power, access, and vulnerability using the 2020 wildfires in Oregon as a case study.
- Developed personal preparedness and policy recommendations to increase resilience to wildfire in Oregon based on solutions in published literature.

# **Social Vulnerability Index Automation**

Ongoing

- Generalized CDC Social Vulnerability Index workflow, allowing any tabular data to be used to develop combinations of custom Social Vulnerability Indexes at any spatial scale.
- Developed an automated Social Vulnerability Index workflow using Python to create easily reproducible tabular and spatial data products.

### **INSTRUTOR AND LEAD GUIDE**

2015-2019

# Portland Kayak Company | Portland, OR

- Led multiple tours per day, teaching basic kayaking skills. Developed tour routines based on customers' abilities. Taught and guided clients from around the world.
- Streamlined rental processes that deal with hundreds of customers a day.
- Rescued dozens of clients with no injuries due to preparedness and safety planning.

### RELEVANT COURSEWORK

### **Technical Education**

- GEOG 360 GIS I: Geographic Information Systems & Theory
- GEOG 361 GIS II: Analysis & Applications
- GEOG 462 GIS III: Programming for Geospatial **Analysis**
- GEOG 370 Geovisualization: Cartography
- GEOG 480 Remote Sensing I: Principles and **Applications**
- CS 340 Introduction to Databases
- CS 361 Software Engineering I
- CS 362 Software Engineering II

# **Practical Application**

- GEOG 451 Planning Principles and Practices for **Resilient Communities**
- GEOG 452 Sustainable Site Planning
- GEOG 430 Resilience-based Natural Resource Management
- GEOG 332 Climate & Health
- GEOG 324 Ecological Biogeography
- GEOG 350 Geography of Natural Hazards
- CS 290 Web Development

# SKILLS AND CERTIFICATIONS

GIS: ArcGIS Pro, ArcGIS Online, ArcGIS Collector, ArcGIS StoryMaps **Development:** Python, Arcade, C++, HTML, CSS, SQL, JavaScript

Databases: Microsoft Access, MySQL

Project Management: Agile, team management, design and specification, project asset management, release schedules

**Public Speaking:** Presentations, reports, classes, trainings Writing: Reports, memos, design documents, situation reports

### **Incident Command System:**

- Introduction to Incident Command System, ICS-100
- Basic Incident Command System for Initial Response, ICS-200

- An Introduction to the National Incident Management System, ICS-700
- National Response Framework, An Introduction, ICS-800
- Basic Emergency Operations Center Functions, ICS-2200