

## Biographical Information & Statement:

---

Telephone: 1-719-331-9796  
E-Mail: mjkane1192@gmail.com  
Portfolio Webpage [mkane40.github.io](https://mkane40.github.io)

I grew up in Monument, CO to mountains and trees and snow. In my personal time, I love to go backpacking (Maroon Bells 4-pass, Escalante/Glen Canyon, San Isabel National Forest, etc.) mountain biking, alpine touring, and rock climbing. I am a big fan of Seinfeld – the best show ever made. I am actively enrolled at the University of Wisconsin, Madison for a M.S. degree in Cartography and GIS - Online GIS Development Program. I have a B.A. degree in Geography & Environmental Studies & a GIS Certificate – Graduated Magna Cum Laude & with Departmental Honors Highest Distinction (May of 2018) at the University of Colorado at Colorado Springs. I am eager to explore creative GIS solutions. I believe geospatial computing & GIS web integration is invaluable in today's data driven industry. My favorite GIS components are in geovisualization, database management, risk modeling, & scripting.

## Academic Achievements:

---

M.S.	University of Wisconsin, Madison
Actively Enrolled	Major: Cartography and GIS - Online GIS Development Program – (4.0 GPA)
B.A.	University of Colorado at Colorado Springs, USA, 2018 Major: Geography & Environmental Studies - (3.8 GPA), Magna Cum Laude & Departmental Honors with Highest Distinction
Certificate:	University of Colorado at Colorado Springs, USA, 2018 Geographic Information Science Certificate

## Major Course Work:

---

- GIS Analysis
- Graphic Design in Cartography
- Geospatial Database Design & Development
- Interactive Cartography & Geovisualization
- Intro to GIS
- Intro to Remote Sensing
- Intro to Geospatial Computing

- Advanced GIS
- Biogeography
- Applied Hydrology
- Honors in Geography
- Geovisualization
- ESRI Mooc

### **Teacher Aid/Grader Course List:**

---

- Intro to GIS, GES - UCCS
- Intro to Remote Sensing, GES - UCCS
- Spatial Database, GES - UCCS
- Advanced GIS, GES - UCCS
- Internet GIS, GES - UCCS
- Digital Earth, GES - UCCS

### **Academic Awards:**

---

2017	2017 Summer Research Assistantship Grant
2018	Undergraduate Travel Award, University of Colorado at Colorado Springs, offered by the Dean of Letters of Arts & Sciences College
2018	Outstanding Undergraduate Student Award Recipient for the Department of Geography & Environmental Studies
2018	Departmental Honors with Highest Distinction

### **Academic Service:**

---

- Advisory Committee as Volunteer (Pikes Peak Outdoor Recreation Alliance) – UCCS, 2018
- Education & Volunteer Management Committee (Pikes Peak Outdoor Recreation Alliance) – UCCS, 2018
- Communications Chair for Green Action Fund – UCCS, 2016 -17
- C & R Committee Student Voice (LAS Ambassador) – UCCS, 2017
- LAS Peak Ambassadors (GES Department chair nomination) UCCS 2016-18

## Education:

---

09/2021 – In-progress

**M.S. Cartography and GIS - Online GIS Development Program**

**GPA: 4.0**

University of Wisconsin, Madison - Online

08/2015 – 05/2018

**B.A. Geography & Environmental Studies, GIS Certificate (2018). Departmental Honors with Highest Distinction**

**GPA: 3.8**

University of Colorado at Colorado Springs, Colorado Springs, CO

08/2012 – 10/2012

**Industrial Designs**

Metropolitan State University, Denver, CO

08/2011 – 05/2012

**Undeclared**

Colorado State University, Fort Collins, CO

## Employment History:

---

9/2022 - Currently Employed

**GIS Analyst (Applications & Integrations), Black Hills Energy – Colorado**

- Develop scripts/models for schema changes and data analysis (python/SQL)
- Design and maintain services, web apps/maps, and dashboards using ArcGIS Pro, Portal, Server Manager, and Online Assistant
- Responsible for managing several databases and workflow enhancement projects
- Perform administrator tasks maintaining users, groups, licensing in ArcGIS Online and Portal

11/2020 - Present

**Senior GIS Technician, Black Hills Energy - Nebraska**

- Created dozens custom script tools for process automation
- Designed and maintained services, web apps/maps, and dashboards
- Redesigned and managed the data quality assurance and control program – utilized Data Reviewer and Access
- Trained eight new employees and contractors on gas GIS asbuilding

5/2019 – 11/2020

**GIS Technician, Aerotek (Contract for Black Hills Energy) - Nebraska**

- Reviewed & edit gas utility assets in GIS
- Wrote scripts/models to create custom tools for process automation
- Ensured data integrity & customer safety

09/2018 – 4/2019

### **Imaging Technician II, Sanborn Map Company - Colorado**

- Performed aerial telemetry, orthorectification, & review high-resolution aerial imagery
- Scripted tools to streamline/automate repetitive workflows
- Facilitated a pilot imagery processing project utilizing drones

06/2018 – 07/2018

### **Research Fellowship, Spatialtemporal Thinking, Computing, & Applications at George Mason University (National Science Foundation Funded) REU Summer - Virginia**

- Assisted in the development of deep learning models to identify/predict tropical cyclone movement
- Utilized Python scripting to collect & preprocess data for model training
- Created several geo-visualizations for project analysis

09/2017 – 05/2018

### **GIS Student Lab Assistant, Geography & Environmental Studies (GES) Department UCCS – Colorado**

- Assist students to perform & execute GIS lab/course work
- Tutored students on upper division course work (Digital Earth, Remote Sensing, Image Processing, Internet GIS, Spatial Database, Intro to GIS, Advanced GIS) Graded upper division lab/course work (Spatial Database, Intro to GIS, Digital Earth)

11/2016 – 05/2018

### **Building Manager, University Center & Events Services**

- Manage several buildings for security & operations
- Manage several teams to ensure proper workflow
- Responsible for A/V technology implementation at UCCS events
- Conduct/confirm proper setup of floor/room layouts for hundreds of UCCS events throughout the semester

7/2016 – 11/2016

### **Events Assistant, University Center & Events Services**

- Coordinate between several teams to ensure proper event flow/production
- Responsible for A/V technology implementation at UCCS events
- Conduct/confirm proper setup of floor/room layouts for hundreds of UCCS events throughout the semester
- Work close with clients in a professional manner

1/2018 – 05/2018

### **Volunteer, Pikes Peak Outdoor Recreation Alliance**

- Assist in web content development
- Write blog reports & press releases
- GIS integration projects

02/2015 – 11/2016

### **Assistant, Colorado Canine Orthopedics**

- Assist surgeons & techs during surgery
- Prep & drape in over 6 patients for surgery daily
- Ensure proper workflow between surgeries, prep, sterilization, & other procedures
- Perform proper sterilization methods to surgical tools & packs

07/2014 – 02/2015

**Laborer/Assistant Tech., Abacus Technology Corporation (Government Contractor with the United Air Force Academy 10<sup>th</sup> Communication Squadron)**

- Led trouble shooting & testing for data/phone communications at four host sites
- Implemented thousands of copper & fiber optic drops
- Trained on new innovations (copper, fiber, & locating technologies)

**Major Academic Projects:**

- **Honors in Geography – Undergraduate Thesis:** Field research was conducted in the summer of 2017 that resulted in an undergraduate honors thesis. Funding provided by the LAS College at UCCS: 2017 Summer Research Assistantship Grant. The research evaluated the impact of ecosystem ecology within North Cheyenne Canyon in Colorado Springs, CO. The research investigated defoliation impact of moths on coniferous trees using Thiessen polygon, spline interpolation, & linear regression models. Results indicated that defoliation was negatively correlated to proximity of a water source & an indirect apparent interaction was found resulting in higher defoliation occurring with the presence of white fir conifers. Wildfire & erosion potential was the main concern of the City of Colorado Springs, so they conducted an aerial spraying of the canyon with a biological pesticide.

**GIS Student Lab Assistant – Teacher Aid Project Assistance:** Mountain Metro ridership data, UCCS student usage over several different time periods, was analyzed & represented using ArcGIS & Adobe Illustrator to the Office of Sustainability. The Office of Sustainability was interested in the results, so they could promote the continuation of a free-pass trial period to enrolled UCCS students.

- **Research Methods Comp Studies - Colorado Springs Undergraduate Research Forum Poster Presentation:** A qualitative analysis on the growth & changes of map geovisualization in modern times with the introduction to recent innovations in GIS platform applications/software/online production. This study compared past data visualization works with modern data visuals, & it integrated three interviews with professors at UCCS that are experts in the field of GIS & data-visual rhetoric. Results paralleled with that of similar studies. A static situation of maintaining old visual concepts & structures was still in place,

but interactive abilities has allowed for user generated hypotheses, insights, & presentation in a greater level. I presented the study at the Colorado Springs Undergraduate Research Forum (CSURF) in 2016 at the Air Force Academy.

## **SOFTWARE**

Python • HTML/CSS/JavaScript • SQL • ESRI (ArcGIS-Pro/Online) • pgAdmin • QGIS • Locus View • Global Mapper • SimActive • Adobe Photoshop/ Illustrator • Ultramap • Tableau • Panoply • Terrset • GeoDa • Microsoft Excel/ Word/VisualStudioCode/Access • Notepad ++ • Power BI

## **Membership & Affiliation:**

---

Association of American Geographers (2018) • Geo-Club member (2016-18) • National Society of Leadership & Success inducted honors member (2016-18) • Gamma Theta Upsilon Honors Society member (2017-18) • "A-Team" Leadership Speaker Series (departmental nomination through student employment), UCCS, (2017-18)

## **Personal Interests/Hobbies:**

---

Biogeography • Ecology • Risk Modelling • Geovisualization • Scripting • Mountain Biking • Backpacking • Skiing/Snowboarding/Backcountry Skiing • Rock Climbing • Longboarding • Lacrosse • Basketball • Seinfeld