

Ella Grady

Email: elmgrady@gmail.com □ LinkedIn: www.linkedin.com/in/ella-grady/

Portfolio: ellagrady.github.io □ Github: www.github.com/ellagrady/

EDUCATION

Clark University - Worcester, Massachusetts **August 2020 – May 2024**
Bachelor of Arts in Computer Science and Political Science, summa cum laude
Final GPA: 3.83
Awards: 2023 Grace Hopper Celebration Scholarship Recipient, Pi Sigma Alpha National Political Science Honor Society, Dean's List First Honors & Second Honors

University of Stirling - Stirling, Scotland **September 2022 – May 2023**
Computer Science and Political Science Study Abroad Experience

PROFESSIONAL EXPERIENCE

Software Engineer **August 2024 - Present**

United States Geological Survey (USGS), United States Digital Corps Fellowship (USDC) - Remote

- Support the Water Mission Area of the USGS as a full stack engineer on a team of 3-4, delivering features independently and collaboratively, working primarily in Python, Java, and SQL
- Supported and led system modernization efforts and upkeep of water data projects used by researchers and policy makers to inform decisions on water, including the [Water Quality Portal](#) (publishes 400M+ records from 1,000+ contributors) and [National Groundwater Monitoring Network](#) (publishes data from 20,000+ locations and ~40 providers), supporting accessibility and visibility of water resource data
- Conduct changes amongst an outdated tech stack and government limitations to bring systems up to modern standards
- Navigated changing requirements and needs as result of policy changes, such as introduction of new public API data sources following the SHARE IT Act
- Manage millions of data records, data retrieval processes, data cleansing, and publishing of data in UI frameworks, including modifying ETL process to free up 900 GB of storage space, saving ~ \$1300 on annual storage costs
- Established and led a cloud deployment process, researching and recommending AWS cloud development kit. Implementing deployment through Docker containerization and CDK pipeline for Python and Java applications
- Present regular demos of accomplished work to teams of various backgrounds (both technical and not)
- Researched and presented regularly on policy topics, such as the history of healthcare in the US, as part of fellowship

Data Technology Intern **June 2023 – August 2023**

Global Atlantic Financial Group - Boston, Massachusetts

- Built out Redshift data warehousing technologies' functionality through agile scrum development
- Collaborated with intern team to recommend business programs enhancing values of diversity, equity, inclusion

Customer Satisfaction Process & Technology Intern **May 2022 – August 2022**

L.L. Bean - Freeport, Maine

- Recommended changes to current processes based on findings of analysis on customer sentiment data
- Developed SQL scripts, Java data analytics processes, and documentation for long term utilization

LEADERSHIP EXPERIENCE

Tech Policy Mentor **July 2025 - Present**

Paragon Policy Fellowship - Remote

- Mentor 2 college students in monthly meetings on exploring the tech policy space, providing advice on career search, topics to explore, and work experience
- Participated in a panel on "understanding the tech policy landscape," providing thoughts on personal experience, current issues, and career advice, drawing from my professional and academic experience

Vice President of Clark Competitive Computing Club **August 2023 – May 2024**

Clark University - Worcester, Massachusetts

- Collaborated with 3 fellow leaders to hold events, manage our roster of 70+ students, recruit and promote as necessary, create agenda/curriculum for club events, workshops, discussions, and outreach, and overall build a community

- Co-facilitated leadership meetings on event planning and club management and club-wide events with president
- Championed, planned, and hosted several outreach events to encourage kids in Worcester to pursue CS, teaching coding through Lego robot education kits, workshops of 10-20 kids
- Planned, promoted, managed, and judged two 48-hour hackathon of 30-40 participants in Fall '23 & Spring '24
- Doubled annual budget from \$3,500 to \$7,000 through budget proposals and presentations, resulting from demonstrated work and recognized benefit to campus and student body

Member of Political Science Department's DEI Working Group

March 2023 – May 2024

Clark University - Worcester, Massachusetts

- Collaborated with ~10 others to ensure department fulfills outlined goals/values for diversity, equity, and inclusion
- Provided oversight to department and faculty in creating community that reflects our members within the department
- Worked closely with faculty to plan and host events for student engagement with the department, such as meet and greets and guest lectures

PROJECTS AND RESEARCH EXPERIENCE

National Ground-Water Monitoring Network Cloud Deployment

January 2025 - September 2025

- Congressionally mandated product under Secure Water Act (2009) and WATER Data Improvement Act (2024)
- Researched and recommended the use of AWS cloud development kit to deploy website
- Built out bare bones template for usage by ~8 different applications and 5 different frameworks (Maven, Tomcat, Spring, Geoserver, Python)
- Implemented Docker containerization for different types of applications, handling static content and necessary resources for application containers
- Customized Gitlab pipelines for deployment based on deployment tiers and application requirements
- Troubleshoot network issues for cloud deployment, managing interactions and traffic to ECS Fargate instances
- Managed stacks in CloudFormation, analyzing network traffic, health checks, service functions, logs

The Reality of AI, US National Security, and Global Power Dynamics

January 2024 – May 2024

- Conducted in-depth analysis of AI's implications on US national security, focusing on threats and mitigation strategies, explaining technical AI topics for non-technical audience
- Collated research from academic journals, articles, and government documents, comparing theories and expert opinions
- Developed a case study on autonomous weapons, exploring their potential impact and policy responses
- Analyzed the current AI security landscape and proposed comprehensive policies to address emerging challenges

A Policy Recommendation & Analysis of the Migrant Crisis in Worcester, Massachusetts

March 2024 – May 2024

- Collaborated in a group of 3 to conduct an analysis of the migrant crisis in Worcester, MA, existing policies, and policy recommendations
- Authored a policy briefing outlining the historical context and current situation in Worcester, our assessment criteria, and policy proposals
- Conducted a policy analysis of our proposals based on our criteria, scoring on effectiveness, economic impact, and feasibility to come to a final policy recommendation drawn from examples in other cities and the work of government groups, scholars, and research or outreach organizations

Examining and Addressing the Impacts of Race & Ethnicity on Food Security

October 2023 - December 2023

- Conducted an in-depth literature review of existing literature on food security and race/ethnicity
- Collated research from academic journals, articles, and studies to contextualize experiences broken down by minority group, and synthesize shared experiences and societal factors across groups
- Proposed policy recommendations, analyzed existing policies, and potential challenges to implementation as means for addressing food insecurity amidst minority racial and ethnic groups

Global Atlantic SQL Parser and Data Lineage Mapper

June 2023 – August 2023

- Developed Python programs to parse SQL queries to single string and databases to dictionaries for financial data
- Designed logic and code mapping data lineage across AWS Redshift databases through data processing (Extract, Transform, and Load), producing end-to-end mapping, for tables with thousands of rows, 100s of columns from raw insertion to business standard formatting for long term utilization
- Loaded mappings to Redshift table, created a Tableau report for business users to access

L.L.Bean Customer Experience in Shipping Analysis

July 2022 – August 2022

- Developed SQL script to gather data related to order shipping information for FY 2021 and 2022, approximately 1.5M orders, comparing to internal delivery quote scores
- Analyzed numerical and customer sentiment data to determine customer's experience from time of order to arrival
- Recommended changes based on financial costs if package delivery quotes were changed and more arrived late

International Organizations' Influence on Data Privacy Regulations

March 2022 – April 2022

- Researched international organizations, including European Union, and Organization for Economic Cooperation and Development, to understand policies on data privacy and positions on protecting sensitive data
- Collated research from variety of academic journals, articles, and organizations' policies, comparing global policies
- Analyzed policies and drew conclusions on the importance of the role international organizations play in data privacy as the internet and technology become increasingly globalized

Sentiment Analysis of Tweets around the 2017 Women's March

February 2022 - March 2022

- Collaborated in a group of 4 to conduct sentiment analysis of tweets about the 2017 Women's March
- Developed program in R to analyze Twitter data of tweets discussing the Women's March, comparing those that mentioned Donald Trump's 2017 presidential inauguration to those that did not

Mask Wearers and Who They Voted For

December 2020

- Designed Python program to create a graphical user interface window of each state in the United States
- Compared data from the 2020 presidential election and results of a New York Times study on mask wearing per state
- Created color-coded map of the nation based on the results of the election

SKILLS

Programming Languages/Formats:

Python, Java, C, SQL, Bash/Shell, HTML, CSS, Javascript, R, JSON, XML, NoSQL, Scheme

Frameworks/Other Software:

Git, Jira, Docker, AWS, AWS Cloud Development Kit, PostgreSQL, Flask, Command Line Interfaces, Jenkins, Spring Boot, Tableau, Confluence, Amazon Redshift, MongoDB, Wireshark

Research Skills:

Ability to break down and understand complex technical topics

Gathering, ordering, and analyzing data and literature for research

Analysis and assessment of policy issue areas, needs, criteria, and policies

Methodical and thorough problem solving processes

Strength in synthesizing and formulating strong research-backed arguments in writing, presentation, and conversation