

Ella Grady

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SKILLS

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

Frameworks/Other Software: Git, Jira, Docker, AWS, PostgreSQL, Flask, Command Line Interfaces, Jenkins, Spring Boot, Tableau, Confluence, Amazon Redshift, MongoDB, Wireshark

PROFESSIONAL EXPERIENCE

Software Engineer

August 2024 - Present

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

- Support the Water Mission Area of the USGS as a full stack software engineer on a small team of 3-4
- Aided with cloud deployment process and other system modernization efforts and upkeep of water data projects used by researchers and policy makers to inform water related decisions, including the [Water Quality Portal](#) (publishes 400M+ records from 1,000+ contributing groups) and [National Groundwater Monitoring Network](#) (publishes data from 20,000+ locations and ~40 agency providers), aiding public access and tracking of data surrounding water resources
- Conduct changes amongst an outdated tech stack and government limitations to bring systems up to modern standards
- Manage millions of data records, data retrieval processes, data cleansing, and publishing of data in UI frameworks, including modifying ETL process to clear up 900 GB of storage space, saving about \$1300 on storage costs annually
- Establish and contribute to a cloud deployment process, researching and recommending AWS CDK. Implementing deployment through Docker containerization and CDK pipeline alongside team members
- Present regular demos of accomplished work
- Research, present, and lead learning & development sessions regularly 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
- Documented program development in formal standards for future referencing on team's Confluence pages
- 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

- Analyzed customer sentiment for major e-commerce brand, collaboration with rest of Customer Experience team
- Recommended changes to current processes based on findings of data analysis
- Developed SQL scripts, Java data analytics processes, and documentation for long term utilization

LEADERSHIP 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

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
- 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

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

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

EDUCATION

Clark University - Worcester, Massachusetts

August 2020 – May 2024

Bachelor of Arts in Computer Science and Political Science, summa cum laude

Awards: 2023 Grace Hopper Conference Scholarship Recipient, Pi Sigma Alpha National Political Science Honor Society

Member, Dean's List First Honors & Second Honors

University of Stirling - Stirling, Scotland

September 2022 – May 2023

Computer Science and Political Science Study Abroad Experience