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, AWS CDK, PostgreSQL, Flask, Command Line Interfaces, Jenkins, Spring Boot, Tableau, Confluence, Amazon Redshift, MongoDB, Wireshark

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
- Led cloud deployment process and other 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+ contributing groups) and National Groundwater Monitoring Network (publishes data from 20,000+ locations and ~40 agency 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- Conduct changes amongst an outdated tech stack and government limitations to bring systems up to modern standards
- 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
- Establish and contribute to 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
- 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

National Ground-Water Monitoring Network Cloud Deployment **January 2025 - Present**

- 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, including Maven, Tomcat, Spring, Geoserver, and 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

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

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 Celebration 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

When I think about why I want to work at Anthropic, it comes down to the fact that I care deeply about the responsible and ethical development of AI - something that I can see lies at the core of the company's mission. I am still in the early years of my career, currently a software engineer in the federal government. For years, I've been passionate about the position of technology in advancing public good with care, but my time in this position, especially with the USGS, has taught me the importance of building systems that serve the public and operate transparently, reliably, and with care. I've worked with complex, high-stakes datasets to support scientists and policymakers, and I've seen firsthand how thoughtful tech design can help people make better decisions that will benefit millions.

Anthropic's research on constitutional AI and emphasis on interpretability and safety align and resonate with both my technical interests and my academic foundations in political science. I've done focused research on AI and U.S. national security, including the implications of autonomous weapons and policy responses. My current work is technical but mission-driven to serve the public, so the intersection of technical work and broader societal impact is where I feel most driven. To me, Anthropic seems like a place where I could bring both sides of my experience to the table.

I admire Anthropic's commitment to long-term thinking, transparency, and building systems that are not just powerful, but aligned with human values and care. I'd be excited to contribute to a team that's setting the standard for what responsible AI development can look like.

I'm excited to apply for this Software Engineering role at Anthropic. With a background in both computer science and political science, I bring a unique blend of technical skills, policy insight, and a deep commitment to ethical technology.

Currently, I work as a software engineer at the U.S. Geological Survey through the United States Digital Corps Fellowship. It's a program and work that focuses on tech with public impact. In my time there, I have led modernization efforts on large-scale water data systems, managed high-volume ETL pipelines, and contributed to secure cloud deployment using AWS and Docker, working on scaling up our product's capabilities while optimizing our resources. While in school, I was studying both computer science and political science because I was passionate about ways tech can be used to better public systems. My time in public service has only further shown me how thoughtful infrastructure and policy design can serve the public good—an approach I feel strongly resonates with Anthropic's mission to build safe and interpretable AI.

My academic and independent research has focused on AI's impact on national security, responsible data use, and international privacy policy. I've analyzed emerging risks of AI misuse and explored how governance frameworks can address harm at scale. I also have hands-on experience with policy enforcement through projects like SQL lineage tracking and data integrity workflows, and I've regularly used data tools like SQL and Tableau to drive insights.

I am early in my career, and though I may not have the experience other candidates have, I feel my perspective can be invaluable, from my education to my time in the public sector, particularly in thinking about how to mitigate harm and how to interpret and enforce policy.

Anthropic's work at the intersection of technical safety and thoughtful governance is exactly where I hope to contribute. I'd love the opportunity to support your safeguards team and help design systems that ensure AI technologies remain beneficial, honest, and safe.