

# Jonathan Sebastiani

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Dedicated data visualization student who is driven, technically strong, and adaptable. Aiming to leverage my interdisciplinary background, intellectual curiosity, and personal values to advance data and software projects toward impactful results that help others. Frequently praised as a problem solver and driving force in team projects by my peers and supervisors, I will be an asset to any group in achieving its goals.

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## Education

Bachelor of Science (3.63 GPA)

June 2025

*Major in Data Visualization, Minors in Data Science and Computer Science & Software Engineering(CSSE)*

**University of Washington Bothell - Bothell, WA**

## Experiences

### *Software Development*

Bioinformatics Capstone

January 2025 – March 2025

- Used Python to code an interactive 3-D protein model for comparative analysis of top-ranked 3-D protein structure prediction algorithms.
- Led my group in creating innovative software through team management, communication, and advanced software development skills.
- Developing a complex model refined skills in collaborative software engineering using Github version control, troubleshooting, and specified design for real-world applications.
- I computationally analyzed large, complex sequence-based molecular data sets through genome assembly, biotic and abiotic single cell sequencing, finding longest common subsequences, and finding sequence motifs by optimizing recursive tree-based algorithms.

Software Engineering Courses

March 2022 – August 2024

- Developed advanced programming skills through diverse software engineering courses, cultivating a wide variety of languages and techniques.
- Ensured quality control and assurance in software products through techniques such as defining requirements, workflow and scheduling automation using bash shell scripting, and utilizing version control functionality using Github.
- Strengthened skills in collaborative software engineering processes to efficiently manage software development life cycles by utilizing SDLC models.
- Solidified the importance of implementing ethical standards (IEEE) in software development by contributing to development projects for real-world software applications.

Network Analysis Final Project

March 2024 – June 2024

- Used R to create a dynamic report analyzing US airline network data for efficiency and sustainability improvements.
- Developed effective data visualizations through network graph theory and advanced data visualization techniques to identify critical data features.
- Leveraged my interdisciplinary background to bring diverse perspectives to a complex research project, strengthening my confidence in utilizing my broad skillset.

## ***Biological Lab Experience***

### **Ecological Monitoring & Research Lab**

January 2025 – March 2025

- Collected and performed EPA-approved techniques on wetland water samples while following quality control and assurance procedures to accurately assess ecosystem health longevity.
- Conducted complex wet lab experiments with a large team, strengthening my skills in collaboration and project management.

### **Biology Lab**

September 2024 – December 2024

- Cultivated wet and dry lab technical skills including experimental design and execution, data collection and analysis, and scientific exploration.
- Developed complex techniques in DNA extraction, amplification, and classification, including polymerase chain reaction (PCR) and gel electrophoresis, strengthening my ability to quickly learn and implement advanced technical skills.
- Solidified an understanding of biological processes and terminology, better preparing me for real-world biological applications.

## ***Data Visualization***

### **Geo-mapping Research Projects**

September 2024 – Current

- Utilized ArcGIS mapping software to develop strong data visualizations and dynamic reports through overlay analyses, interactive features, and advanced spatial statistics.
- Developed geographical hot spot analyses from open-source spatial data and case studies to identify key contributors to Seattle's carbon footprint.

### **Data Analysis Reports**

March 2023 – Current

- Utilized programming skills in R and Python for data analysis by cleaning and handling datasets, conducting data statistics, and interpreting results.
- Used statistical software skills to conduct statistical modeling and design dynamic reports on web-based interfacing platforms.

## ***Work & Personal***

### **Collegiate Cheer – University of Washington**

May 2021 – Nov 2024

- I applied my athletic and personal skills to learn advanced acrobatic stunts and tumbling at the collegiate level, cultivating self-accountability and time management.
- Utilizing my perseverance and teamwork skills, I led my team in both the Division 1A Large Coed and Gameday competitions at the 2024 Universal Cheer Association (UCA) College Nationals.
- Driven by my ambition and work ethic, I became the first athlete in UW history to compete at the United Spirit Association (USA) Collegiate Championship in the partner stunting division, earning 4th place in 2023.
- My courage inspired strong motivation in my team, and I returned to compete the following year with many teammates competing alongside me, bringing a renewed competitive standard to UW cheer.

### **Manager – Barbie's Berries, Ferndale, WA**

Summers 2019 – 2022

- Efficiently managed a team to meet deliverables by delegating tasks, monitoring performance, and facilitating open communication.
- Led by example to foster a supportive workplace culture that prioritizes team well-being, increasing morale and productivity.

- Developed diverse workplace skills through experience in sales, customer service, product management, and finances.

## Awards and Honors

### *University of Washington*

- Dean's List: Winter 2023 – Winter 2025
- Annual Dean's List: 2023 – 2024

## Technical Skills

### *Software Development*

**Languages** – JavaScript, Python, R, Java, HTML, CSS, C++, C#, Bash

**Techniques** – Object-orientated programming, data structures, statistical programming, event-driven architecture, continuous integration and development, UI/UX design, supervised and unsupervised machine learning, code complexity analysis, optimization, code review, testing, debugging

**Software Engineering** – Architecture and design, software development life-cycle methodologies, workflows, configuration management, containerization and virtual environments, code documentation, code review

**IDE and Version Control Software** – Git/GitHub, Docker, Visual Studio Code, IntelliJ, RStudio, JupyterHub

**Other** – Arduino embedded systems, 2D and 3D video game development, front-end web development

### *Data Analytics*

**Data Manipulation** – Data cleaning and preprocessing, transformations and mutations, statistical analysis

**Statistical Analysis Platforms** – Python, R, Excel, Tableau, ArcGIS

**Packages** – Python (NumPy, pandas, Biopython), R (tidyverse, ggplot2, dplyr, lubridate, glue)

**Data Visualization** – Graph and map theory, geospatial visualizations, dynamic visualizations, dashboard and report design, aesthetic design

**Other** – Algorithmic implementation and optimization, experimental design and execution, mathematics

## Interpersonal Skills

**Personal** – Adaptability, intellectual curiosity, creativity, critical thinking, problem solving, strong work ethic, time management, collaboration

**Communication** – Verbal and written communication, conflict resolution, active listening, compassion, relationship building

**Leadership** – Team management and task delegation, team orientated, leads through example