# Brenna Wolf (She/Her) Fort Collins, CO

wolfbrenna3@gmail.com ❖ (970) 779 - 9905 ❖ LinkedIn


## EDUCATION

**Colorado State University** **08/2021 - present**

*Bachelor of Science in Computer Science | Minor in Mathematics*

*Fort Collins, CO*

- GPA: 3.95
- Academic Achievements:
  - Dean's List – College of Natural Sciences 2021-2024
  - Honors – [2021-PRESENT]

## EXPERIENCE

**Sustain Research Lab – Colorado State University** **01/2024 – present**

*Software Development Research Assistant, NSF REU full-time Summer Position* *Fort Collins, CO*

- Full stack software development, coding in React, Typescript, and Python, to build a web app called Zephyr, an Air Quality Visualization tool, that maps the air quality index across the US everyday back to 1980.
- Ingesting data from the Environmental Protection Agency Air Quality System API and Air Now using scripts that run daily and bi-monthly.
- Experience with big data, database systems, aggregation pipelines, server endpoints, and UI design.
- Collaborate with other students and my lead professor to engineer each project.
- Implemented microservices to handle different queries that can be utilized in different web apps, such as a demographics query.
- Exposure to machine learning and storing trained models in databases.

**Bacaro - Wine Bar** **09/2023 – 1/2024**

*Server* *Fort Collins, CO*

- Delivered seamless tableside service, including proper wine presentation, pouring, and etiquette.
- Learned the importance of presentation and being knowledgeable of the products you are selling
- Helped manage wine inventory

**Fired Up Pizzeria** **2018 – 2022**

*Server, Hostess, Food-Runner, Managed To-Go Orders* *Durango, CO*

- Worked with customers in a high-paced environment while staying calm, collected and polite
- Developed leadership skills by communicating with my coworkers and customers during busy lunch and dinner rushes
- Learned concise communication skills and through managing the phone for To-Go orders

## PROJECTS

**Using Dijkstra's Shortest Paths to Route Packets in a Network Overlay (Java)**

- Constructed a logical overlay over a distributed set of nodes
- Computed shortest paths using Dijkstra's algorithm to route packets in the system
- Utilizes threading, TCP communications, and marshalling and unmarshalling

**Document Summarization using TF-IDF Scores and MapReduce (Java)**

- Calculates the TF, IDF, and TF-IDF values for all terms for all sub-collections in a corpus, then creates a summary for each article that consists of the top 5 unique sentences within the article.

**Estimating PageRank Values of Wikipedia Articles using Apache Spark (Java)**

- Calculates PageRank values of currently available Wikipedia articles using the PageRank algorithm.
- Implements three different scenarios: (1) Estimation of PageRank values under ideal conditions, (2) while considering dead-end articles using taxation, and (3) creates a 'Wikipedia Bomb' to demonstrate artificial PageRank inflation.

**CPU Scheduling Algorithms (C++):**

- Implemented First Come First Serve (non-preemptive), Shortest Job First (preemptive), and Priority Scheduling (preemptive) algorithms to simulate process management.
- Analyzed performance metrics on an input of CSV of processes, including turnaround time, waiting time, and throughput for each scheduling algorithm.

## SKILLS & INTERESTS

**Skills:** Java, Python, MapReduce, Spark, Time Management, Leadership, Problem-Solving

**Interests:** Running, swimming, painting, reading, camping, telemark skiing, sand volleyball, and polar plunging!