

# Elizabeth Johnson

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## EDUCATION

**Pomona College**, Claremont, CA

Expected May 2024

B.A. Computer Science (3.96/4.00 GPA)

- Pomona College Scholar – top 25% of class (Spring '22, Fall '21, Fall '20)

### Relevant Coursework

- Site Reliability and Software Systems, Computer Systems (Fall '22), Data Structures and Algorithms, Data Science

## EXPERIENCE

### Software Developer

August 2022 – Present

Software Development Group, Associated Students of Pomona College (ASPC)

- Use Ruby on Rails to improve ASPC website providing course and professor reviews, dining and housing information, online voting system to 5000+ students at the Claremont Colleges
- Collaborate with 3 other developers, product manager, ASPC Senate and staff, on-campus clubs and organizations

### Research Assistant

May 2022 – Present

Autonomous Robotics and Complex Systems (ARCS) Lab, Pomona College

- Generate synthetic image data for image classification models improving autonomous navigation using high-fidelity environments in Unreal Engine and open-source software
- Increased dataset size by 126x by implementing commands to randomize several simulation parameters

### Discrete Math and Functional Programming Teaching Assistant

January – May 2022

Pomona College Computer Science Department

- Hosted biweekly mentor sessions to 38 students for help in math and computing concepts, graded problem sets

### Katie Porter for Congress, Field Organizer Intern

March – Nov 2020

- Trained 200+ volunteers on phone bank software to make calls aimed at collecting voter data on policy positions, support of Rep. Porter, and increase voter turnout

## PROJECTS

### Will Smith v. Chris Rock: Tweets from the 2022 Oscars

April – August 2022

- Used Twitter API, Natural Language Toolkit, Plotly, NumPy, and Pandas to conduct sentiment analysis of user tweets from four Twitter topics concerning the conflict
- Create interactive data visualization dashboard using React, CSS and AWS Amplify displaying results per Twitter topic

### Identifying Intrinsically Disordered Proteins from Primary Sequences

January – May 2022

- Utilized Scikit-learn, NumPy, and Pandas to evaluate the performance of several deep learning architectures in classifying protein structure with 4 Claremont College students
- Discovered model identifying disordered proteins in 81/100 cases, created 250k+ line dataset from 3 different protein databases

### Sagehen Sprint

September – December 2021

- Created an online web game using JavaScript (p5.js), CSS, HTML of Pomona College's mascot, Cecil the Sagehen
- Increased accessibility by allowing user to control game using voice commands, used Procreate to create original game graphics such as character animation and background

## SKILLS

Programming Languages: Proficient in Python, Java, HTML, CSS; Experience in SQL, JavaScript, C, R

Frameworks and Tools: PostgreSQL, Visual Studio Code, Git/ GitHub, Remote Development, React, Streamlit, AWS, Ruby on Rails, Unreal Engine, Eclipse, RStudio, Jupyter Notebook

## EXTRACURRICULARS

### Clubs

- Data Assistant for The Student Life, create data visualization dashboards for school newspaper read by 5000+ students

### US Speed Skating

- 2018 US Olympic Trials – 14th and youngest qualifier nationally for Short Track Speed Skating
- 2020 Amateur Speed Skating Union Foundation- Winner of \$2,500 Medallion Scholarship
- 2x US Junior World Team Member, 2x Age Group Record Holder – Short Track & Long Track Speed Skating