

# ELIZABETH W. FREY

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## EDUCATION

**Dartmouth College**, Hanover, NH

**Jun 2024**

*Bachelor of Arts, Computer Science Major, Neuroscience Minor*

**GPA 3.99/4.0**

*Relevant Coursework:* Object-Oriented Programming, Algorithms, Software Design and Implementation, Computer Networks, Full Stack Web Development, Machine Learning, Statistics, Discrete Math, Linear Algebra, Accelerated Computational Linguistics, The Dark Side of AI/ML, Computational Neuroscience, Cellular and Molecular Neuroscience

*Honors/Awards:* Salutatorian, Rufus Choate Scholar, Phi Beta Kappa, three academic citations for meritorious performance

## RELEVANT EXPERIENCE

**Palantir Technologies**, New York, NY

**Jun 2023-Sep 2023**

*Forward Deployed Software Engineer Intern, Commercial Life Sciences*

- Owned HackWeek project backend development, leveraging **PySpark** and **Classifiers**, that led to meeting with CTO
- Designed and implemented new data pipeline and workflow for key client use case using **PySpark** in Foundry, integrating **LLMs** for data harmonization, leading client meetings to conduct user research and deliver demos
- Rapidly developed frontend and backend functionality using **React**, **TypeScript**, **Conjure** for contract renewal

**Digital Applied Learning and Innovation Lab**, Hanover, NH

**Mar 2022-Present**

*Full Stack Lead, Development Mentor, Software Developer*

- Work with small teams to implement and deploy a different project every 10 weeks (20 hrs/week during school year)
- Manage 11+ full stack projects, lead 13 developer mentors and 50 developers while updating lab tech stack each term
- Developer lead for a SmartScope (Raspberry Pi, **PostgresQL**), two **React Native** mobile apps, and a **React.js** site
  - SmartScope received an **Honorable Mention in the NIH's 2023 VentureWell DEBUT competition**

**Tesla, Inc.**, Palo Alto, CA

**Sep 2022-Dec 2022**

*Software Engineering Intern, Sitemanager Application*

- Successfully designed and developed P1 over-the-air upgrade scripts and firmware in **Python**, **Golang** and **SCons** affecting 4000+ superchargers, preventing loss of all profits from affected superchargers in 2023 (\$100,000+/year)
- Represented team in project meetings, collaborated with staff firmware, integration, and service engineers
- Received exceeding expectations performance review

**Computational and Cognitive Neuroscience Laboratory**, Hanover, NH

**Mar 2021-Jun 2022**

*Researcher and Software Developer under Alireza Soltani, Ph.D.*

- Increased participant numbers by 350% (21 to 74) by using **HTML/CSS**, **JavaScript** to create online experiment

## ADDITIONAL EXPERIENCE

**DartUP, Magnuson Center for Entrepreneurship**, Hanover, NH

**Jan 2021-Present**

*Cofounder and Vice President*

- Co-lead team of 15 creating social entrepreneurship challenge, focusing on interdisciplinary coordination of start-ups
- Acquired \$9000+ in funding for 20 workshops in 2021-2023 with 100+ total participants

## PROJECTS

**Russian Song Genre Classification through Song Lyrics**

**May 2023**

*Computational Linguistics Final*

- Performed TF-IDF vectorization and BERT encoding, and algorithms such as Naïve Bayes, logistic regression, SVM, and random forest for classification using **Python** libraries **NLTK**, **SpaCy**, and **Sklearn**
- Achieved an accuracy of 43.8% on a balanced dataset and 72.7% on an unbalanced dataset

**WellBuddies**

**Jun 2022**

*HackDartmouth 2022, Full Stack Web Development*

- Received 2<sup>nd</sup> place Health and Wellness award for landing page using **React**, **HTML**, **CSS**, and **Firebase**
- Converted into full stack mobile application using **React Native**, **MongoDB**, **Node.js**, **Express.js** for final project
- Supports account creation, persistent login, and custom health activity suggestions based on calendar availability

**Peer-to-Peer Dropbox**

**Nov 2022**

*Computer Networks Final*

- Led team (**scrum leader**) in leveraging **Python** for a functional **P2P** Dropbox-like program
- Implemented threading, select, and sockets for simultaneous upload/download and the UDP reliable transport layer

**Parts of Speech Tagger**

**Nov 2020**

*Java Program*

- Implemented POS tagging using **Hidden Markov Models** and **Viterbi** backtracking. Labelled 36,000 words from the Brown Corpus with 96% accuracy

## SKILLS & CERTIFICATIONS

**Technical:** Java, JavaScript, TypeScript, Python, React.js/React-Native, Node.js/Express, Git, HTML/CSS, Golang, Networks

**Activities:** Kappa Kappa Gamma Sorority, Women in Computer Science, HackDartmouth, Willing Hands