MADELINE E. HESS

madeline.e.hess.19@dartmouth.edu • maddiehess.me • github.com/m-hess • linkedin.com/in/m-hess • (415) 367-5742

EDUCATION

2015 – 2019 **DARTMOUTH COLLEGE** Hanover, NH

Bachelor of Arts, June 2019. GPA: 3.2/4.0.
Majors: *(1) Economics, (2) Quantitative Social Science, emphasis in Computer Science.*
Awards: Academic Citation for exceptional performance in Full-Stack Web Development, Kaiser Award for exemplary student leadership.

HIGHLIGHTED COURSEWORK
Full-Stack Web Development, Machine Learning & Statistical Analysis, Data Visualization, Differential Equations, Advanced Mathematics Topics: Millennium Prize Problems, Econometrics, International Finance.

WORK EXPERIENCE

2018 – 2019 **DIGITAL ARTS, LEADERSHIP & INNOVATION LAB AT DARTMOUTH COLLEGE** Hanover, NH
Software Engineer

- Rapidly built full-stack web applications for startups and student innovators to demo their ideas (see *Projects*)
- Created innovative course planning tool for students to easily design majors and visualize progress towards graduation. Tool is currently being considered for integration by Dartmouth College's administration.
- Constructed and deployed web platform and database for users from any background (kindergarten through academia) to understand threat of pine beetle infestations through data visualizations and risk scores.

2018 – 2018 **UBER TECHNOLOGIES, INC.** San Francisco, CA
Intern, Global Security (June – September 2018)

- Analyzed rider and driver behavior in disasters using Tableau and R and leveraged findings to propose policy changes to inform Uber's cooperation with FEMA in emergency situations
- Created platform to track security compliance during the JUMP bike launch into 50 cities using GSuite tools

Intern, Physical Security (January – March, 2018)

- Developed a web portal to visualize security data using Mapbox-GL.js to enable security team leaders to take quick action to mitigate threats to Uber's physical security
- Analyzed causes for underreporting in sentiment analysis software and implemented improvement solutions

2017 – 2018 **COLLEGE PULSE, LLC.** Hanover, NH
Data Scientist

- Performed statistical analysis using R to identify unusual predictive relationships in student opinion data
- Summarized findings in articles and data visualizations using D3.js

PROJECT EXPERIENCE

Spring 2019 **DPLANNER,** *d-planner.surge.sh*
Worked with team of 6 to a create web application aimed at solving to challenge of poorly organized and inefficient course planning tools at Dartmouth College. Built error handling (using React, Redux, Node, Express and MongoDB) and beautified styling and user interface (using SASS).

Winter 2019 **PROJECT PINE BEETLE,** *pine-beetle-prediction.surge.sh*
Collaborated with the US Forest Service to develop a website for visualizing the threat of Southern Pine Beetles to forest health. Built database, data pipelines, and backend routing (using React, Node, Express and MongoDB).

Fall 2018 **PART OF SPEECH TAGGER**
Implemented a Hidden Markov Model (using object-oriented methods in Java) to predict the part of speech for each word in a file or statement entered in the command line. Model works with greater than 90% accuracy.

SKILLS & INTERESTS

- ***Computer Languages:*** Highly skilled in JavaScript, Python, Java, C, R, SQL, MATLAB, Git Version Control.
- ***Technologies:*** Node, Express, React, Redux, D3, MongoDB, Heroku, Socket.io, Pandas, Scikit-Learn
- ***Leadership:*** President of the Dartmouth Coffee Club (2017-2019), and Inter-Sorority Council (2018-2019).
- ***Interests:*** Advanced ocean and whitewater kayaking, bouldering, ceramics, coffee roasting, 3Blue1Brown.