

# Mark Shiyang Tao

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## Education

Dartmouth College, B.A.

Class of (June) 2023

- Computer Science major and Government double major; GPA: 3.71
  - Honors and Awards: First-year fellow (awarded public policy internship in DC)
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## Relevant Experience

Falcon Partners, LLC | *Technology Consulting Intern*

January 2022 — Present

- Building “Jobs” tab in FalconCXO by adding postings to JS app; increasing user interaction 4 times
- Integrating backend-API survey data from AWS servers to data technicians for visualization
- Assisting Salesforce engineers by writing additional classes for various data fields on candidates; implementing a web-scraper that crawls through the web and gathers updated information for tables

Federal Energy Regulatory Commission (FERC) | *Data Analyst Intern*

June 2020 — August 2020

- Analyzed over 8 million energy-based financial transactions between firms across the US to produce a slide deck on potential loopholes of countervailing market power using code in R, Python, SQL, and SAS
  - Compiled analyses using PowerPoint and Excel and presented database strategies to better identify book-out statements to FERC economists, analysts, lawyers, and engineers in 40-minute discussion
  - Trained a Keras deep-learning classifier to detect over 20,000 outliers in electric market data
  - Produced parametrized R notebooks and MySQL queries to evaluate accuracy of data-refining process
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## Personal Projects

[Tiny Search Engine](#) (C)

- A search engine that accepts queries and returns a list of URLs most relevant to each word of the query
- Supports and/or conjunction preference for query word ranking; uses a web crawler and a page indexer

[AR T-Shirt Projector](#) (Unity, C#, Java)

- A Vuforia program that scans a target image (shirt) and renders a flaming beating heart and rib cage
- Executed as an .apk file, utilizes a button and an opaque pipeline to both obscure and reveal the body

[Collaborative Graphic Editor](#) (Java)

- A server that enables multiple clients to connect to a main thread and communicate (like Google Docs)
- Handles multiple objects at a time, enables clients to edit, and processes client requests to join server

[Dartmouth Map Navigator](#) (Python)

- An interactive map showing the shortest path from one point on the Dartmouth campus to another
- Constructs a dictionary (using breadth-first search) from an initial vertex to a given final vertex

[Amazon Review Classifier](#) (Jupyter Notebook)

- An ML-based classifier predicting the rating of an Amazon product using feature-generating review text
  - Utilizes random forest, support vector machines, boosting and bagging, and many other classifiers
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## Technical Skills

- Languages: Java, Python, R, SQL, SAS, Linux, C, C#
  - Programs: Excel, PowerPoint, Unity, Maya, all Adobe products
  - Databases: Salesforce, MySQL, SQLite, Oracle, Firebase, Microsoft SQL Server
  - Relevant Coursework: Intro to Computation, Problem Solving via Object-Oriented Programming, AR/VR Development, Linear Algebra, Software Design and Implementation, Algorithms
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## Additional Interests and Extracurricular Activities

- Dartmouth Men's Volleyball Team: Captain
- **P****R****I****D****E** Committee: Co-Chair

September 2019 — present

March 2021—May 2021