Charles Threlkeld

charles.l.threlkeld@gmail.com
68 Brooks Ave, Arlington, MA 02474
+1 812.431.8049
https://charles-threlkeld.github.io

EDUCATION

- **Tufts University**, M.S., PhD Candidate — 2018–Present
  Computer Science, Cognitive Science

- **Indiana University**, B.A., B.S — 2007–2010
  Philosophy, Economics, Mathematics

PROFESSIONAL EXPERIENCE

Tufts University , Medford, MA — January 2018–Present
Research Assistant

- Created unsupervised learning model of speech acts to build peech act theory based on local conversation context.

- Collated data disperate data sources to a single, reusable format for research use, resulting in five published papers.

- Modeled statistical properties of conversation to empirically distinguish between competing theories of cognition, turn-taking, and speech structure.

- Annotated corpus of natural conversation, resulting in falsification of a long-standing linguistic hypothesis.

- Created modern, cross-platform conversation annotation software to replace the state-of-the-art which has been deprecated.

- Managed undergraduate writing tools to make conversation annotation software interoperable with phonetic annotation software.

- Managed undergraduate work to improve data pipeline, resulting in her honors thesis work on experimental vs natural language expectations.

- Engineered robot dialogue component to interoperate with physical action reasoning.

Tufts University , Medford, MA — January 2018–Present
Teaching Assistant

- Created course content for online and in-person classes, including assignments, quizzes, and final projects for nearly 100 students over three semesters.

- Managed several other teaching assistants to improve workflow between professor, teaching assistants, and students.

- Presented lecture series on Bayesian modelling to introduce students to the concepts and teach them state-of-the-art techniques.

- Introduced dozens students to rigorous mathematical notation necessary for presenting their ideas unambiguously.

- Provided timely and robust feedback to students for up to weekly assignments.

Tufts University , Medford, MA   September 2020–May 2022
Emerging Scholars Program PhD Coordinator

- Created recruitment and informational content to attract over 150 students to the program in its initial four semesters.

- Iterated content for students as we learned what piqued the interest of first years.

- Focused content toward the research strengths of the university in order to steer students toward fruitful relationships with their professors.

- Recruited and managed the rest of the team who delivered the content to the students.

Rosenthal Collins Group, LLC , Chicago, IL   Oct 2010 - Apr 2017
Risk Analyst

- Produced ongoing long-term study of the options markets with respect to the futures price, finding that the strike prices exerted pressure on the underlying, enabling an edge in brokerage.

- Managed risk assessment of portfolios totalling over $100M, detailing susceptibility to price and volatility changes using commercial software.

- Produced bespoke risk analyses for clients, detailing time, volatility, futures price, calendar, and inter-commodity spread risks.

- Developed in-house software for risk assessment, allowing assessments beyond what was available off-the-shelf, and saving the group over $10,000 monthly in licensing costs.

- Created graphical snapshots of market or risk analyses that could be interpreted easily by clients and coworkers.

PROJECTS

- **Ironman™ Finisher Analysis**: Scrapes the Ironman™ website for finisher information in a series of races. Tidies the data, then analyzes to compare the relative difficulties of the races under study.

- **Ironman™ Heat Analysis**: Builds on the information in the Ironman™ Finisher Analysis by cross-referencing the historical weather data for the locations of the races. Then allows race-difficulty weighting by daily weather.

- ***John Company***: Model the board game *John Company* (Sierra Madre Games 2017) in order to help the designer and developer more fully understand how changes to the random event probabilities affect the game state throughout the game play.

SKILLS

Basic Knowledge	HTML, CSS, Javascript
Intermediate Knowledge	Linux, Microsoft Windows, Ruby, ML, Clojure, git, SQL, LaTeX
Advanced Knowledge	Python, Data Science, R, Racket, Bayesian Data Analysis