Tripp Dow

Curriculum Vitae

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○ *prettytrippy*

Education

2021–Present
BA Computer Science
University of Minnesota, Minneapolis, MN
Honors student. 3.8 GPA. Pursuing minors in mathematics and philosophy.

Work Experience

May 2023–July 2023
Undergraduate Research Assistant
Michigan State University, East Lansing, Michigan
Created algorithms to disambiguate author names within archives of academic literature. Wrote parallel code for use on supercomputers, used pandas to process and manipulate large datasets, and created visualizations of coauthor networks and historical trends.

June 2022–August 2022
Software Engineering Intern
Area 10 Labs, Rochester, MN
Designed a mobile application for medical spirometry, with a GUI and storage system. Used mathematical and statistical methods to model respiratory data, process time-series signals, and calibrate clinical equipment.

Skills

Languages	Python, C, C#, Java, Bash
Tools	LaTeX, Unity, GitHub, MongoDB
Python Libraries	Pandas, Selenium, Flask, PyTorch, Scikit Learn
Other Libraries	GNU GMP, MathNET

Projects

Ongoing

Identifying Worldwide Astrophysicists from Scientific Literature

Michigan State University

Using publication metadata from the NASA Astronomical Data System, we implement algorithms for disambiguating author names in academic literature. Our approach focuses on networks of coauthors, using graphical attributes to teach machine learning models author reference similarity. Our approach has shown accuracy close to the best known algorithms, even within large databases, and using few publication attributes.

Spring 2022

Language and Food

DFRACS Program

As part of a selective research scholarship for first-year students, I worked with the UMN Linguistics Department, in the fields of pragmatics and conversation analysis. We aimed to understand how conversations progress during meals. Focus was placed on humor and references, imagination and modal statements, and the use of evidence during discussions.