

MADELINE FAYE HOLT

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EDUCATION

GEORGIA INSTITUTE OF TECHNOLOGY, *Honors Program*
Bachelor of Science, Major in Computer Science, Minor in Linguistics

Atlanta, Ga

Expected Graduation, May 2023

GPA: 3.91/4.0 (Faculty Honors, Dean's List)

Threads/Concentrations: Intelligence, Theory

SKILLS

Technical Concepts: Data structures, Algorithms, Object Oriented Programming, Information Visualization, Machine Learning, Natural Language Processing, Discrete Mathematics, Applied Combinatorics, Linear Algebra

Programming Languages: Java, Python, SQL, JavaScript, HTML, CSS, C#, Git

Frameworks: PyTorch, NLTK, TensorFlow, NumPy, spaCy, Pandas, scikit-learn, D3

Operating Systems: Unix, Linux

EXPERIENCE

Georgia Institute of Technology SALT Lab, Atlanta, Ga

October 2020 - Present

Research Assistant in Dr. Diyi Yang's Social and Language Technologies (SALT) Lab

- Conducting NLP research to explore counselor success for an online therapy platform.
- Created an annotated corpus of Motivational Interviewing utterances using semi-supervised labelling and data augmentation. Used this corpus to build 17 binary classifiers using PyTorch and BERT.
- Utilizing the constructed classifiers to conduct research analysis on therapeutic strategies with the aim of submitting a paper to CSCW 2022.

Carrier Global, Atlanta, Ga

June 2021 – August 2021

Software Engineer Intern for the Analytics and Automation Department

- Built a paraphrasing model using GoogleAI's T5 Transformer to automate creating utterances for internal and external chat-bots.
- Collaborated with Carrier's Cyber Department to create a chatbot using Microsoft Azure, C#.NET, and JavaScript.
- Worked with Carrier's Legal Department to automate their denied party screening service through AgilePoint Workflow and the MKDenial API. The automation saved Carrier 19,200 hours per year.
- Gained experience in all project phases by following Waterfall and Agile Methodologies.

Georgia Institute of Technology DILAC, Atlanta, Ga

February 2021 – August 2021

Research assistant for Dr. Brad Rittenhouse in the Digital Integrative Liberal Arts Center

- Built a Python framework to extract data from the works of Ralph Waldo Emerson using Named Entity Recognition, spaCy, and PyTorch for a project under contract with the Oxford University Press.
- Used supervised machine learning to extract correct Wikidata entities.
- Developed an interactive, dynamic Knowledge Graph of Entities in D3 to analyze the relevant works.

Google Computer Science Research Mentorship Program

January 2021 – April 2021

Google Research Mentee

- Held weekly meetings with a Google mentor to learn more about the CS research space and developed connections with researchers and fellow mentees.

PROJECTS

A Study in Hate, Atlanta, Ga

September 2021 – December 2021

Semester Project focused on the explainability of transformer-based models and implicit hate classification

- Trained four transformer-based models and conducted feature manipulation and attention modelling.

Got Bias?, Atlanta, Ga

October 2020

Project for HackGT 2020 to create an algorithm to filter news based on bias. Sponsored by NewsQ

- Developed a sentiment analysis model using supervised machine learning and the NLTK to detect bias in articles. The developed algorithm won 3rd place in for Georgia Tech's annual hackathon.