

Jon Saad-Falcon

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Education

Georgia Institute of Technology — Atlanta, GA

August 2018 - May 2022

B.S. - M.S. Program in Computer Science

GPA: 3.96

- Stamps President's Scholar, Honors Program, Tapia Scholarship, and U.N. Millennium Fellowship
- Minors in Mathematics and Linguistics
- Undergraduate Research Thesis: *PeopleMap: NLP and Visualization Tool for Mapping Out Researchers*

Research Experience

Predoctoral Young Investigator, Allen Institute for Artificial Intelligence (AI2)

August 2021 - Present

Pursuing AI residency position with Dan Weld, Tom Hope, and Jonathan Bragg

- Creating new exploration techniques for COVID-19 Mechanism Knowledge Base
- Developing semantically-logical tokenizers for information extraction of biomedical documents
- Building clustering algorithms for accelerating the rate of hypothesis generation and literature-based discovery

Center for the Study of Language and Information (CSLI), Stanford University

June 2021 - August 2021

Pursuing research internship with Christopher Potts

- NSF-Funded REU opportunity at the Stanford Artificial Intelligence Laboratory (SAIL)
- Accepted for a cohort of 12 students out of 723 applicants
- Constructing new benchmark dataset for naturalistic, technical question-answering models

Allen Institute for Artificial Intelligence (AI2), Semantic Scholar

October 2020 - May 2021

Pursuing research internship with Dan Weld and Tom Hope

- Constructed search engine for exploring of challenges and future directions within COVID-19 literature
- Collaborated with 10+ medical experts to design better tools for assisting scientific research

Natural Language Processing Research, Speech and Language Technologies Lab

August 2019 - Present

Pursuing research projects with Diyi Yang

- Developing project to computationally analyze persuasion strategies and contexts within dialogue datasets
- Extracting rhetorical strategies from persuasive requests to find patterns and connections in successful attempts
- Analyzing LinkedIn datasets using LSTM models to understand and predict career paths

Human-Centered Artificial Intelligence Research, Data Science and Artificial Intelligence Lab

August 2019 - Present

Pursuing research projects with Polo Chau

- Leading project to build a visual, explorable map of researchers and their work using natural language processing
- Exploring strategies of attack and defense in adversarial machine learning through partnership project with Intel
- Constructed open-source application platform for adversarial machine learning tactics used by over 1000 students

Honors and Awards

Stamps President's Scholarship, Georgia Tech

Fall 2018

- Premier scholarship given to 40 undergraduate students out of 30,000 applicants to Georgia Tech
- Covers over \$200,000 in tuition, room & board, and enrichment funding towards academic development

Donald V. Jackson Fellowship, Georgia Tech

Spring 2021

- Awarded to well-rounded, first-year master's students in College of Computing
- Given to three students who best embody the values of academic excellence and leadership

President's Undergraduate Research Award, Georgia Tech

Fall 2020

- \$1,500 award to support undergraduate research with Georgia Tech faculty advisor

Computer Science Research Mentorship Program, Google

Spring 2021

- Apprenticeship program for matching university students with mentors in Google Research
- Undergo semester-long mentorship for preparing research publications and graduate school applications

D.E. Shaw Nexus Fellowship, D.E. Shaw and Co.

Fall 2020

- Three-day program for exposing talented students in STEM to careers and opportunities in finance
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Publications and Demos

A Search Engine for Discovery of Scientific Challenges and Directions: Case Study on COVID-19

- Dan Lahav, **Jon Saad-Falcon**, ..., Polo Chau, Diyi Yang, Eric Horvitz, Daniel Weld, and Tom Hope
- *Pre-print, under review*

Large-Scale Analysis of Career Transitions: The Impact of Human Capital, Job History, and Language Factors

- Austin Wright, Caleb Ziems, Haekyu Park, **Jon Saad-Falcon**, Polo Chau, Diyi Yang, Maria Tomprou
- *Pre-print, under review*

Argo Scholar: Interactive Visual Exploration of Literature in Browsers

- Kevin Li, Haoyang Yang, Anish Upadhayay, Zhiyan Zhou, **Jon Saad-Falcon**, Polo Chau
- *Published at IEEE VIS 2021*

EnergyVis: Interactively Tracking and Exploring Energy Consumption for ML Models

- Omar Shaikh, **Jon Saad-Falcon**, Austin Wright, Nilaksh Das, Scott Freitas, Omar Asensio, Polo Chau
- *Published at CHI 2021*

Mapping Researchers with PeopleMap

- **Jon Saad-Falcon**, Omar Shaikh, Zijie Wang, Austin Wright, Sasha Richardson, Polo Chau
- *Published at IEEE VIS 2020*
- *Earned the VAST Best Poster Research Award, Honorable Mention*

Examining the Ordering of Rhetorical Strategies in Persuasive Requests

- Omar Shaikh, Jiaao Chen, **Jon Saad-Falcon**, Diyi Yang
- *Published at Findings of EMNLP 2020*

Understanding and Fortifying Machine Learning Based Security Analytics

- Demo of the MLSplit platform for experimenting with adversarial machine learning techniques
- *Presented at 2019 NSF Secure and Trustworthy Cyberspace Principal Investigators Meeting*

Industry Experience

Summer Analyst in the Global Investment Research Division, Goldman Sachs

July - August 2020

- Initiated an independent project using quantitative techniques and NLP tools to perform valuation of companies
- Collaborated with traders and external clients to develop reliable Python tools for extending coverage of sectors
- Assisted energy sector research team as they advise corporate clients on financial decisions

Etude, Co-founder of Atlanta-based student startup

August 2018 - March 2020

- Leading development of Étude, an advanced PDF reader designed for professionals
- Established partnership with Wolfram Research to implement their natural language processing APIs in a new product
- Implementing textual analysis APIs for smart summarizer and smart word search capabilities

Conference Participation

November 2020 - **EMNLP 2020**, Student Volunteer

July 2020 - **ACL 2020**, Student Volunteer

Skills

Programming:	Python, Java, and Javascript (advanced), Scala (intermediate), C and Assembly (proficient)
Concepts:	Machine learning, natural language processing, computational social science, data visualization, deep learning, functional programming, statistics, algorithms, complexity theory, automata theory, graph theory, quantitative finance, algorithmic trading, artificial intelligence
Communication:	Presentations, conference papers, technical reports, lab write-ups, research posters
Language:	English (native), Spanish (native), Arabic (beginner), French (beginner)
