

Duncan Ross

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EDUCATION

Stanford University

Stanford, CA

March 2024

- Master of Science in Statistics: Data Science

University of Florida

Gainesville, FL

August 2017 – December 2021

- Bachelor of Science in Industrial and Systems Engineering
- Honors Thesis: *Predictive Models for Dengue Fever Tracking in Latin American Countries*

GPA: 3.88/4.0

The Hong Kong Polytechnic University

Hong Kong

January 2019 - May 2019

- Bachelor of Science in Computer Engineering

PROFESSIONAL EXPERIENCE

Google

Mountain View, CA

May 2023 - August 2023

Software Engineering Intern

- Implemented a tree-based model for tuning notification cutoff thresholds to automatically meet daily target metrics.
- Managed the testing of a pre-production model, launching 3 live experiments using the Mendel experimentation platform.
- Results suggest a robust model, which could improve the experience of millions of iOS/Android Google app users globally.

Eesley Lab for Management Research

Stanford, CA

December 2022 - Present

Data Science Researcher

- Built web-scraping infra to crawl 10m+ pages of reviews from Glassdoor for every publicly traded company on NYSE.
- Leveraged DistilBERT and K-Means for clustered topic modeling, finding underlying themes in employee reviews.
- Utilized VADER NLP model to perform sentiment analysis reviews on 80m+ reviews from Glassdoor.com.
- Modeled employee sentiment pre and post company IPO, considering the complexity of multiple stakeholder relationships.

Datadog

New York, NY

May 2022 - August 2022

Data Science Intern

- Implemented a change-point detection algorithm for isolating anomalies on time-series data from the Watchdog platform.
- Built time-series labeling tool in JS and Python to speed up hand-labeling of 5,000+ time series anomalies.
- Developed a time-series k-means model for deriving trends from hundreds of data-sources within a given pipeline.

Google

Mountain View, CA

May 2020 - August 2020

Software Engineering Intern

- Designed 3 open-source data visualizations using d3.js and TypeScript for Google Data Studio available to all users.
- Conducted code reviews with/for teammates, extended existing codebases, performed unit testing on +5,000 lines of code.
- Developed visualization package capability to enable +25 new visualizations from 3rd party creators.

Morgan Stanley

New York, NY

May 2019 - August 2019

Summer Technology Analyst Intern

- Created an Angular-based web application to manage +250 daily problem-support tickets for 5 applications.
- Employed ML and NLP to effectively link incidents to problem tickets, decreasing manual labor hours by 20hrs/week.
- Transformed Perl-based API into REST API using PerlRaisin and set up Swagger node for firm-wide use.

INVOLVEMENT

Society of Hispanic Professional Engineers (SHPE)

Gainesville, FL

August 2017 – August 2021

Vice President of Internal Affairs

- Led a cabinet of 15 directors, overseeing 15 unique events ranging from chapter development to mentorship.
- Directed “Women in STEM”, a series of seminars to discuss the challenges for women and minorities in the workplace.
- Created a digital database of +130 companies for prospective undergraduate students seeking employment.

PROJECT EXPERIENCE

Predicting Fall Risk from Smartphone Videos (CS231N Class Project)

Stanford, CA

June 2023

Python, PyTorch, HuggingFace Transformers

- Implemented multimodal neural networks to incorporate survey data and at-home sit-to-stand test videos to predict fall risk.
- Built effective intermediate motion capture CNN to predict joint angles and pose metrics with an OpenPose backbone.
- Post-hoc analyses demonstrated no significant biases across gender, ethnicity.
- Results suggest the model can serve as a preliminary diagnostic to alert people if they are at an elevated risk of falling.

NLP Enabled English Auto-grader (CS224N Class Project)

Stanford, CA

April 2023

Python, PyTorch, HuggingFace Transformers

- Utilized transformer models to create an autograder for English proficiency exams (e.g., TOEFL, ICNALE).
- Implemented transformers for written, spoken proficiency (built on DistilBERT and Wav2Vec2, respectively).
- Results suggest that transformer models have the potential to be a reliable and efficient alternative to human grading.

SKILLS, HONORS AND AWARDS

Software & Languages: Python, Pandas, NumPy, R, SQL, Java, TypeScript, JavaScript, C++, English (Native), Spanish (Native)

Awards: University Scholars Program (Aug. 20), Code-For-Change Hackathon Winner (Feb. 20), SHPE National Scholar (Jun. 19)

Miscellaneous: Boating and motorcycle licensed, Rugby player, novice golfer, world traveler (32 countries)