

# Abhinav Madahar

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## INDUSTRY EXPERIENCE

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### Academia.edu

*Software Engineer*

July 2021 — March 2022

*San Francisco, California*

- Helped develop Academia's core web app, focusing on the new courses product
- Worked across the stack, using React with Typescript on the frontend and Ruby on Rails on the backend
- Ran A/B tests to find which emails resonated the best with users

### Johnson & Johnson

*Data Science Co-op*

April 2020 — September 2020

*Titusville, New Jersey*

- Predicted glaucoma with 81% accuracy, 85% sensitivity, and 75% specificity using an RNN
- Previous ML models for glaucoma required retinal scans, but this is the first in the world which doesn't
- The model reads a patient's drug usage, disease history, basic medical data, and medical device usage

### Oracle

*Data Science Intern*

May 2019 — August 2019

*Santa Clara, California*

- Replaced existing 91% MASE model with my 95% MASE model
- Developed CNN-based, LSTM-based, and GRU-based time series models to predict cloud service usage
- Gave model's forecast to business side so they can use it to buy sufficient GPUs for upcoming quarter

### Johnson & Johnson

*Medical Devices Data Science Intern*

May 2018 — August 2018

*Somerville, New Jersey*

- Used RNNs and CNNs to recognize human activity using wearable sensor data at 95% accuracy
- Predicted post-op complications using ML techniques like naive bayes with real-world electronic health data

## RESEARCH EXPERIENCE

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### Research Experience for Undergraduates (REU) under James Abello

May 2020 — September 2020

- Explored plotting very large network graphs using summarization techniques
- Applied techniques to a graph-based data set of short stories to find literary patterns and clusters

### Research Assistant under Sungjin Ahn

September 2018 — May 2019

- Learned about reinforcement learning with planning agents by reading research papers and replicating results

### Research Assistant under Gerard de Melo

September 2017 — September 2018

- Introduced to machine learning, focusing on using deep learning with RNNs to summarize documents

## CLASS PROJECTS

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### Bike Ridership Data Visualization Project

January 2020 — May 2020

- Developed website that visualizes bike ridership in NYC for graduate CS class using plotly and mapbox
- The professor praised my development and hired me as a research assistant to continue working on this project

### ASSIST

January 2018

- Wrote a machine learning model which predicts the likelihood of surviving a stroke using Keras
- Won the HopHacks 3<sup>rd</sup>-place award, a Google award, and a John Snow Labs award

## EDUCATION

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### Rutgers University

B.Sc. with double major in Computer Science and Mathematics

September 2017 — May 2021

*New Brunswick, New Jersey*