JAMIE NACHBAR

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EDUCATION

Yale University B.S. expected May 2022
Double Major in Computer Science and Mathematics GPA: 3.74/4.0

RELEVANT COURSEWORK

Data Structures | Systems Programming | Algorithms | Linear Algebra | Deep Learning | Networks
Discrete Math | Vector Calculus | Parallel Programming | Digital Systems | Stochastic Processes

WORK EXPERIENCE

Reservoir Labs, Software Engineering Intern Summer 2021

- Designed and implemented a deployment pipeline using AWS to build Reservoir Labs' Gradient Graph product from scratch; built a series of product demos on top of those scripts: **Demo Link**.
- Mathematically proved conjectures about scheduling multiple batches on a datacenter network.

University of Virginia, Research Intern Summer 2020

- Conducted research in the UVA Signal Intelligence Lab with Prof. Haifeng Xu. Investigated optimal signalling schemes in Bayesian games, with a focus on routing games. Wrote and submitted a paper for publication: **ArXiv Link**

Yale University, Head TA for Structure of Networks Spring 2020 and Spring 2021

- Taught graph theory, probability, and linear algebra to students taking Structure of Networks.
- Automated and randomized assignments with scripts to prevent sharing answers (See below).

Astraea, Software Engineering Intern Summer 2017 and Summer 2018

- Developed a tool to visualize 7-band multispectral satellite imagery: **Github**
- Created applications of the RasterFrames API, such as tracking deforestation in the Amazon Rainforest and measuring construction of a housing project using satellite imagery and ML: **Github**

SELECTED PROJECTS

Automated Homework and Exam System Spring 2021

- Automated the creation of randomized assignments with a system of Google scripts. Programmed a web app to manage the assignment, submission, and grading of homework and exams to over a hundred students, in conjunction with other TA duties for Structure of Networks.

Deep Learning Alzheimer's Diagnosis: Github Spring 2020

- Implemented a Convolutional LSTM neural network in PyTorch with a team of other students to predict Alzheimer diagnosis given a sequence of MRI brain scans.
- Designed the network architecture, as well as located, partitioned, and prepared the data, which consists of thousands of three-dimensional brain scans, for use in training and testing of the model.

TECHNICAL SKILLS

Programming Languages: Python, C, C++, Java, Scala, Javascript
Libraries / Frameworks: Git, Jupyter, NumPy, Pandas, Apache Spark, PyTorch, AWS