# JAMIE NACHBAR

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## EDUCATION

**Yale University** *August 2018 - May 2022*
Double Major in Computer Science and Mathematics Major GPA: 3.89/4.0 | Overall GPA: 3.70/4.0
Yale Summer Session in Germany (Max Kade Award) *May 2019 - July 2019*
Member of Yale College Executive Committee *August 2019 - Present*

## RELEVANT COURSEWORK

Data Structures | Vector Calculus | Probability | Linear Algebra | Abstract Algebra | Complex Analysis Intensive Algorithms | Real Analysis | Deep Learning | Artificial Intelligence | Discrete Math

## WORK EXPERIENCE

**University of Virginia, Research Intern, Charlottesville, VA** Summer 2020

- Conducted research in the UVA Signal Intelligence Lab under Haifeng Xu. Investigated the power of signalling as applied to Bayesian games, with a focus on routing games.

**Astraea, Software Intern, Charlottesville, VA** Summer 2017 and Summer 2018

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

## SELECTED PROJECTS

**The Power of Signalling in Bayesian Games**: Summer - 2020

- Defined the power of signalling to formalize how much better one type of signalling scheme is than another, and proved tight bounds on the power of signalling.
- Focused specifically on Bayesian routing games, a type of game that naturally arises when uncertain drivers are attempting to route traffic through a network of roads, for instance.

**Neural Network Weather Prediction: Github** Summer - 2020

- Created a neural network designed to predict rainfall in the city of Rio de Janeiro, using a dataset from the Brazilian government.
- Used ten years of weather data to train the PyTorch network to predict the next 4 hours of rainfall given the past 8 hours of weather data (8 features for each hour).

**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.

## TECHNICAL SKILLS

**Programming Languages:** Python, C, C++, Java, Scala, Bash
**Libraries:** Git, Jupyter, NumPy, Pandas, Apache Spark, PyTorch
**Miscellaneous:** Intermediate German, Cooking, Trail Running, Basic Juggling