

# Maya Ravichandran

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## Education

### University of Cambridge, Trinity College

*MPhil in Therapeutic Sciences*

Fall 2022 – Summer 2023

Cambridge, UK

### University of Oxford, New College

*MSc in Advanced Computer Science*

Fall 2021 – Summer 2022

Oxford, UK

### Rutgers University–New Brunswick

*B.S. in Computer Science*

Fall 2017 – Spring 2021

New Brunswick, NJ

## Work Experience

### Regrello

*Software Engineer*

Fall 2023 - Present

San Francisco, CA/Remote

- Developing a platform for auto-generation of supply chain workflows using advanced AI techniques
- Regrello is a Series A startup in the supply chain automation space, funded by a16z, Tiger Global and others

### Apollo Therapeutics

*Business Development Intern*

Spring 2023

Cambridge, UK

- Developed rapid screening method for identifying pharmaceutical drugs that would be strong acquisition candidates using filters on a pharmaceutical dataset, reducing number of drugs that needed to be manually examined by 77%
- Used method to identify a viable acquisition candidate, which Apollo leadership plans to pursue a deal on

### MongoDB

*Software Engineering (Machine Learning) Intern*

Summer 2021

New York, NY

- Developed a machine learning model for the novel application of predicting performance regressions based on code changes, using Python, Pandas, and Scikit-learn
- Achieved 0.88 accuracy and 0.91 ROC AUC score with passive-aggressive model, surpassing team's expectations of a minimum accuracy of 0.75 for a viable proof of concept model
- Completed end-to-end machine learning development, including constructing a data pipeline integrating data from GitHub and a performance dataset, data preprocessing, feature engineering, and model prototyping and evaluation

### MongoDB

*Software Engineering Intern*

Summer 2020

New York, NY

- Designed and implemented a data pipeline within MongoDB's distributed, open source continuous integration system
- Implemented pipeline in Go that logged system metrics from cloud hosts running test suites, streamed data to a data sink using gRPC, stored data using MongoDB and Amazon AWS S3, and made data accessible via REST API for diagnosis of system failures via machine learning and data visualization

## Bank of America Merrill Lynch

Sales and Trading Summer Analyst

Summer 2019

New York, NY

- > Designed and priced hedges using a custom basket of equities and an options collar
- > Constructed five-year interest rate swap spreads to maximize revenue and minimize risk

## Commvault

Software Engineering Intern

Summer 2018

Tinton Falls, NJ

- > Designed and developed a data pipeline that collected user activity data and inputted it into ARIMA statistical prediction models using C++ for intelligent scheduling of background activities to enhance system availability for customers

## Commvault

Software Engineering Intern

Summer 2017

Tinton Falls, NJ

- > To improve CI/CD workflow for in-house software development by 1,300 developers, created a full-stack application that contained a dynamic web interface using Angular, Bootstrap, HTML, CSS, Java, and MS SQL Server

## Research Experience

### University of Oxford

Machine Learning Researcher

Summer 2022

Oxford, UK

- > Trained natural language processing transformer models (based on BERT architecture, 110M parameters) and support vector machine (SVM) models on whole genome sequencing data to predict presence of Alzheimer's disease
- > Using approach of SVM models applied to single nucleotide polymorphisms, achieved 0.65 ROC AUC

### National Institutes of Health

Bioinformatics Researcher

Summer 2018

Bethesda, MD

- > Improved accuracy of probabilistic framework for discovery of structural variants (large-scale genome mutations) by eliminating false positives with machine learning, using R

## Publications

- > Ravichandran, M.\*, Koch, M.\*, Das, T.\*, Khatri, N\*. (2023). **GraphRNN Revisited: An Ablation Study and Extensions for Directed Acyclic Graphs**. NeurIPS 2023: New Frontiers in Graph Learning Workshop. ([Paper link](#))

## Projects

### Domain Adaptation of Convolutional Neural Networks for Diagnosis of COVID-19 Chest X-Rays

- > Improved accuracy of unsupervised learning model from 49.5% with fine-tuned ResNet model to 62.25% by applying transfer learning via domain adversarial neural networks to a dataset of viral pneumonia images, using PyTorch ([GitHub link](#))

## Skills

**Languages** Python, Java, C++, C, Go, JavaScript, TypeScript, R, HTML, CSS, LaTeX

**Tools/Frameworks** PyTorch, Pandas, Scikit-learn, Angular, SQL, MongoDB, AWS, Unix, Git, GitHub

## Awards

**Marshall Scholar** One of ~40 US citizens selected yearly by British government based on academic, leadership, & ambassadorial potential, receiving full funding for graduate studies in the UK at Oxford & Cambridge

**Presidential Scholar** One of top 0.3% of applicants to Rutgers University-New Brunswick, receiving full scholarship for undergraduate studies