Yamini Vibha Ananth

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Education

Columbia University *3.73/4.0* 2019- 2023
School of Engineering & Applied Sciences
B.S. in Applied Math, Minor in Computer Science

Coursework
Undergrad: Data Structures, CS Theory, Sys Prog, Prob+Stats, Numerical Methods, Dynamical Systems, Complex Vars, Analysis+Optimization
Grad: AI, ML, NLP, DataViz, Numerical Methods for PDEs, Databases, Cloud Computing

Awards
Dean's List (x4) - top **10%** semester GPA in engineering school
Coca-Cola Scholar - **1 of 150** selected from **90k** on the basis of academics, leadership, & service

Skills

Programming
Python, Java, R, Bash, JavaScript, UNIX

Data Science
Tensorflow/Keras, PyTorch, sk-learn, MySQL, PostgresSQL, Jupyter, Tableau

Platforms and Services
GCP, Airflow, Dataflow, Beam, Terraform, Kafka

Web Development + Architecture
LAMP - Linux, Apache, MySQL, Python/Flask

Projects

Fighting Bushfires with Drones | COMAP Mathematical Contest in Modeling > About > 2020
> Designed **optimization model** and **least-costs path model** based on Dijkstra's algorithm to develop a strategy for drone usage in firefighting
> Implemented using **Python & Jupyter**
> Project was in **top 6%** of **10,000** submissions

AI Fellowship Capstone Project > About > 2022
> To be filled in later this week
> Placeholder
> Placeholder
> Placeholder
> Placeholder

Experience

Data Science Intern, hackNY Fellow | Oden Technologies > About > Summer 2022
> Implemented and benchmarked novel **neural network** algorithm for changepoint detection/ identifying stable segments in **time-series data**
> Optimized existing lookup method in **Beam Java** streaming pipeline by reducing runtime by **60%**, saving **x%** cost per lookup.

Computational Biology Intern | MD Anderson > About > Summer 2021
> Used **Python, Bash** scripts**,** & **Jupyter** in a Neptune **AWS server** to develop an **ETL pipeline** for ingesting unstructured gene essentiality data
> Mentored high school layman in **Python**

Computational Chem Intern | O'Shaughnessy Lab > About > Summer 2020
> Developed automated **MATLAB** scripts for edge detection of simple pores, reduced **30min** manual workflow to **30secs** (**60x** faster)
> Analyzed the identified edges in **R** with **Magick** and visualized results using **ImageJ**

Teaching & Leadership

Teaching Assistant | Discrete Math, ODE > About > 2021-Present
> Guided **300+ students** per class per semester
> Taught & co-wrote **11** recitations, **6** coding assignments, and **2** exams per semester

Data Scientist | Columbia Data Product Initiative > About > 2021
> Developed stock prediction model based on sentiment analysis of news headlines scraped using **BeautifulSoup** with **NLTK**
> Trained **LSTM** model across **1M+ rows/1k+ features**, performed **PCA**, improved performance **by 16%** to **76% accuracy**

Conference Director | Columbia Society of Women Engineers > About > 2019-Present
> Led committee of 13 volunteers to organize event hosting **250+** NYC area high school girls
> Increased budget **400%** by national grants
> Led documentation efforts to ensure repeatability