

Kyle Alford

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EDUCATION

Columbia University

B.S., Computer Science, GPA 3.89/4.0

New York, NY

Expected 05/2023

WORK & LEADERSHIP EXPERIENCE

Shah Lab @ Memorial Sloan Kettering Cancer Center

Computational Biologist

New York, NY

05/2021 – Present

- Applying Hidden Markov Models to single cell genomics data and benchmarking the performance using Python (Pyro)
- Collaborate with a team of software developers and computational biologists to create algorithms used in single cell transcriptomics, cancer phylogenetics and cancer evolution

Moffitt Cancer Center & Research Institute

Oncology Team Volunteer

Tampa, FL

05/2021 – Present

- Escort patients to exam areas, assist with stocking and maintaining inventory, assist with preparation for each patient in exam areas, provide wheelchair transport if needed and support staff as directed.

Columbia Biomedical Accelerator (BiomedX)

Project Team Intern

New York, NY

02/2021 – Present

- Liaise between 10 Biotech startups and the Columbia Biomedical Engineering Department
- Transcribe meetings between companies and regulatory team then deliver feedback to the teams
- Updated the website design and functionality with HTML, CSS and JavaScript

Independent Computational Biology Project

Computational Biologist

New York, NY

02/2021 – Present

- Investigating different patterns and outcomes from RNA-seq junction count dataset from ALS patients
- Used Torch, TensorFlow and supervised learning to isolate different regions of the brain and which genes most highly effect ALS patients

University of Miami Public Health Research

Undergraduate Epidemiology Researcher

Coral Gables, FL

09/2019 – 02/2021

- Coordinated with Dr. Naresh Kumar (PI) to investigate the effects of volatile organic compounds (VOCs) and other air pollutants on respiratory health in large metropolitan cities
- Learned to operate a hemocytometer, capture bacteria samples from house visits, grow bacterial colonies, read NMR data, and conduct various assays on HEK-293 cells
- Published a meta-analysis on our findings, performed statistical analysis using R

Columbia Data Science Society

Executive Board Member

New York, NY

08/2020 – Present

- Organized several events such as a Biotech Founders Panel, Data Visualization in R, Data Ontologies and RNA-seq/Bioconductor Workshop
- Updated the website design and functionality with HTML, CSS and JavaScript

Columbia Systems Biology Initiative

Executive Board Member

New York, NY

08/2020 – Present

- Created several events and computational biology workshops teaching topics in computational genomics, evolutionary biology
- Assisted in the organization of the annual Computational Biology Expo that hosted several Columbia researchers such as Cory Abate-Shen, David Knowles, Andrea Califano, Itsik Pe'er and Dana Pe'er
- Regularly updated the website to display the latest events and workshops

Tampa General Hospital

Clinical Intern

Tampa, FL

04/2019 – 06/2019

- Shadowed along with several medical teams ranging from ER to Pediatrics
- Conducted administrative work for each medical team, including handling sensitive patient paperwork
- Organized and managed meeting dates and times for each medical group, in addition to creating powerpoint presentations to explain daily duties to incoming volunteers

SKILLS, ACTIVITIES & INTERESTS

- **Languages:** English, Spanish, Hindi, Urdu
- **Technical Skills:** Proficiency in Python, R, Java, C++, JS, HTML, CSS, Adobe Illustrator, AutoCAD Inventor
- **Interests:** Digital design, Biotech/entrepreneurs/start-ups, studying the economy
- **Awards:** 2021 Zvi Galil Award, Columbia University Dean's List