Neil Jethani

Curriculum Vitae

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Education

2016–2024 **MD/PhD**, *New York University, New York, New York*.

2012 **B.S. Bioengineering**, *University of California, San Diego, La Jolla, CA*.

2015 **High School**, *Biotechnology High School, Freehold, NJ*.

Research

2016-Present **MD/PhD Candidate: Rajesh Ranganath Lab, Yindalon Aphinyanaphongs Lab**

Thesis: Expanding The Clinical Utility of Electrocardiogram Recordings - Discovering Disease Association Using *Interpretable* Machine Learning Models.

Advisors: Rajesh Ranganath and Yindalon Aphinyanaphongs

2015-2016 **Senior Design Student: Todd Coleman Lab**

We designed the first iteration of a tool that non invasively measures pupillary response and cardiac orienting response measurements as an indicator of childhood cognitive abilities. This for designed for use with children suffering from Fetal Alcohol Spectrum Disorders.

2014-2016 **Undergraduate Researcher: Anajan Rao Lab**

Worked on establishing a Tet-assisted bisulfite sequencing (TAB-seq) protocol using Neglaria Tet (NgTet1), allowing for the sequencing of methylated and hydroxyl methylated cytosine bases.

2012-2013 **Undergraduate Researcher: Shyni Varghese Lab**

Conducted studies on nano-encapsulated stem cells, with the intent to inject these cells into mice suffering from muscular distrophy. Also, attempted two use micro and macro fluidics to model atherosclerosis.

Publications

Jethani, N., Sudarshan, M., Aphinyanaphongs, Y., and Ranganath, R. (2021). Have we learned to explain?: How interpretability methods can learn to encode predictions in their interpretations. *AISTATS*.

Major, V. J., Jethani, N., and Aphinyanaphongs, Y. (2020). Estimating real-world performance of a predictive model: a case-study in predicting mortality. *JAMIA Open*, 3(2):243–251.

Smilowitz, N. R., Jethani, N., Chen, J., Aphinyanaphongs, Y., Zhang, R., Dogra, S., Alviar, C. L., Keller, N., Razzouk, L., Quinones-Camacho, A., et al. (2020). Myocardial injury in adults hospitalized with covid-19. *Circulation*, 142(24):2393–2395.

Work Experience

2019 **Machine Learning Intern: 3M: M*Modal**

Worked on creating a patient embedding/representation from time series data extracted from the MIMIC III Dataset. We used a modified transformer architecture to do so.

2014 **Intern: VaxInnate**

Created a number of fluorescently tagged flagellin (STF2) fused antigen proteins for use in a pharmacodynamic study of their flagship vaccine.

2012 **Intern: Angel Medical Systems**

Tested AngelMed's implantable EKG device, the Guardian System, in an ex vivo environment that mimiced biological conductance.

Teaching

Teaching Assistant, NYU

INTREPID ntroduction to Medical Bioinformatics and Computing. Prof: Yin Aphinyanaphons

Teaching Assistant, UCSD

BENG 1 Introduction to Bioengineering. Prof: Shu Chien

Scholastic and Curricular Achievements

2016 Award: Exceptional Senior Design Project
University of California, San Diego: Department of Bioengineering

2012-2016 Provost Honors
University of California, San Diego

2012-2014 AT&T Scholarship
AT&T

Technical Skills

Programming Python, R, MatLab

Software LaTeX, MS Word, MS Excel, MS Powerpoint

Languages

English Fluent

Hindi Full Comprehension