NIKHITA DAMARAJU

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EDUCATION

COLUMBIA UNIVERSITY MAILMAN SCHOOL OF PUBLIC HEALTH, New York, NY — expected May, 2022
Master of Science (MS), Biostatistics – Statistical Genetics — CGPA: 3.57/4.0
Relevant courses: *Data Science, Machine Learning, Biostatistical Methods-I & II, Statistical Genetic Modelling, Population Genetics, Statistical Inference, Probability*

INDIAN INSTITUTE OF TECHNOLOGY MADRAS, Chennai, TN, India — August, 2015 – May, 2020
Bachelor and Master of Science (B.S.-M.S.), Biological Sciences — CGPA: 3.71/4.0

- Minor in Computational Biology
- Government of India DST - INSPIRE fellow, best academic record

Relevant Courses: *Bioinformatics, Biostatistics, Computational Biology, Systems Biology, Quantitative and Population Genetics, Genomics and Proteomics, Immunology, Cancer Biology, Biotechnology in Healthcare*

SKILLS AND INTERESTS

Computer Languages R (rstats, shiny), Python (pandas, scikit-learn), SAS, C, C++, MATLAB
Interests Statistical Genetics, Biostatistics, Biomedical Data Science, Heath Informatics

RELEVANT EXPERIENCE

INFLAMMATIX INC. — Burlingame, CA
Computational biology summer intern — May 2021 – present

- Identified a gene signature for diagnosis of Systemic Lupus Erythematosus using multi-cohort analysis

COLUMBIA UNIVERSITY — New York, NY
HERBERT IRVING CENTER FOR CANCER RESEARCH
Data Science Institute Scholar 2020 — October 2020 – April 2021
Advisor: Dr. Alison Taylor

- Repurposed copy number predicting algorithms with hidden markov models to predict aneuploidy using WES datasets.
- Identified chromosome arm imbalance and whole chromosome anomalies in the development of head and neck cancers.

INDIAN INSTITUTE OF TECHNOLOGY MADRAS — Chennai, TN, India
Dual Degree Thesis, Robert Bosch Center for Data Science and AI — July 2019 – May 2020
Thesis advisor: Dr. Himanshu Sinha

- Assessed multiple gestational age (GA) estimation models on preterm birth prediction for a cohort of North-Indian women.
- Designed a regression-based model for GA estimation in first trimester with highest preterm labelling accuracy [1].
- Implemented machine learning approaches using ultrasound metrics to predict GA accurately in second and third trimesters.
- Worked in close collaboration with a team of clinicians at the Translational Health Sciences Institute, Delhi as a part of Bill and Melinda Gates foundation grant, Grand Challenges of India grant and BIRAC grant.
- Presented research at multiple Data Science and AI academic conferences.

STANFORD UNIVERSITY — Palo Alto, CA
Summer Research Intern, Department of Biochemistry — May – August 2019
Advisor: Dr. Julia Salzman

- Developed a generalized linear model using R to predict alternative splicing events consisting of 50 features using primate transcriptomic data combined with genomic information of key regulatory elements.
- Identified multiple SINE and LINE repeat aggregations in more than 20 genes conserved across six primate families.

STANFORD UNIVERSITY Palo Alto, CA
Khorana summer fellowship intern, Department of Biochemistry May – August 2018
Advisor: Dr. Julia Salzman

- Selected as one of the 40 Khorana fellowship grant recipients among 1000 applicants.

Designed a bioinformatic analysis pipeline for analyzing circRNAs in Epstein Barr virus infected human B-cell transcriptomic datasets downloaded from SRA to identify differences in lytic and latent infection stages of the virus.

LEADERSHIP EXPERIENCE

COLUMBIA UNIVERSITY New York, NY
Teaching Assistant, Department of Biostatistics

- P8105: Data Science August – December 2021
- P8104: Probability

INDIAN INSTITUTE OF TECHNOLOGY MADRAS Chennai, TN, India
Teaching Assistant

- Synthetic Biology: reviewed and graded research seminars for over 25 students July – December 2019
- Quantitative and Population Genetics: formulated questions for quizzes and end semester examinations along with grading of 2 online research seminars for over 20 students Jan – May 2020

CONFERENCES

- Runners up and best software tool out of 15 teams, AI Genomics Hackathon, SVAI, San Francisco (2019)
- Initiative for Biological Systems Engineering 5th workshop (2019) – best poster and presentation
- Gold medal, Foundational Advance track, International Genetically Engineered Machine Competition, Boston (2018)

PUBLICATIONS

[1] Vijayram R*, **Damaraju N*,** Xavier A*, Desiraju BK, Thiruvengadam R, Misra S, et al. Comparison of first trimester dating methods for gestational age estimation and their implication on preterm birth classification in a North Indian cohort. BMC Pregnancy and Childbirth. 2021 Apr 30;21(1):343. *(* co-first authors)*

[2] B P Kailash*, D Karthik*, Mousami Shinde*, **Nikhita Damaraju***, et al., ”ChassiDex: A microbial database useful for synthetic biology applications”, submitted on July 16th, 2019, bioRxiv 703033 *(*co- first authors)*