RAEHASH SHAH

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PORTFOLIO
http://shahraehash.github.io

EDUCATION

CARNEGIE MELLON UNIVERSITY   2020 - 2025
MS Computational Biology
BS Computational Biology – GPA: 3.7
     Concentration in Machine Learning // Minor in Biomedical Engineering
Teaching Assistant for Machine Learning in Health Care, Computational Medicine and Great Ideas in Computational Biology

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EXPERIENCE

GEn1E Lifesciences   01/2024 – 08/2024
Remote // *Bioinformatics Intern*
- Developed and implemented a disease classification algorithm and a PubMed search engine leveraging NLP (Natural Language Processing) and KG (Knowledge Graph) techniques to streamline the drug discovery research pipeline.

REGENERON – IOPS   05/2023 – 07/2023
Rensellear, NY // *Bioinformatics Intern*
- Developed a novel machine learning pipeline consisting of a stable diffusion generative model in a GMP (Good Manufacturing Processes) environment to create ONT (Oxford Nanopore Sequencing Technology) signal data from viral and host DNA sequencing data.

WERFEN – INSTRUMENTATION LABORATORY   05/2022 – 08/2022
Bedford, MA // *Software Systems Engineering Intern*
- Designed and developed a TDM (Time-division multiplexing) Protocol Sniffer for a RS485 Bus on a throughput hemostasis instrument firmware.

ENGLANDER INSTITUTE FOR PRECISION MEDICINE   07/2019 – 09/2021
New York, NY // *Data Science Intern*
- Analyzed tumor heterogeneity across primary tumor samples and organoids at different points of tumor culture through Hierarchical Clustering, PCA, Differential Gene Expression Analysis, GSEA Pathway Analysis

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PUBLICATIONS

"*SCN9A*: Proposal of Voltage-Gated Ion Channels as a Novel Diagnostic Marker for Alzheimer's Disease" (2023) Shah D., Shah R., Waldron A., Leonardi D., https://doi.org/10.1101/2023.05.18.23289925

"Virome Sniff" (2017) Vargas-Asencio J., Nunez R., Musunuri R., Hao Y., McCormack M., Hagerty P., Shah R., Bradic M., Busby B., https://osf.io/e9mnf/

SKILLS

Genomics: STAR, RNA-seq, TADs in Hi-C data, DNA Methylation, Genome Alignment
Machine Learning (ML): Distributed ML, GANs, LLMs, Markovian Models, Neural Networks
Programming Languages: C/C++, Git, Java, Python, R, Shell/Bash Scripting
Skills & Certifications: Scuba Diving, Dance Team, Soccer, Agile Atlassian, Swim Instructor
Languages: English, Gujarati, Spanish, Hindi