Soham Mukherjee

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EDUCATION

University of California Berkeley Berkeley, CA
College of Engineering: Major- Bioengineering Aug 2019-Present
Minor - Computer Science

Monta Vista High School Cupertino, CA

Activities: Captain Club Soccer (De Anza Force, NPL 1) and Captain School Varsity Soccer. Member Cal Ski Club

PROFESSIONAL EXPERIENCE

University of California San Francisco –Department of Pathology May 2021-Present
Research Intern

- Worked on techniques to understand the relevance of endogenous and environmental mutagenic processes in plasmacytoid dendritic cell neoplasm (BPDCN) at Prof. Robert Ohgami's Lab. Our results identified links between tobacco exposure, aging, nucleotide excision repair deficiency, UV exposure, and endogenous deamination in BPDCN.
- Submitted 2 manuscripts based on this research work to 2 peer reviewed publications.

Stanford University – Department of Electrical Engineering June 2018-March 2019
Research Intern

- Worked on a novel data compression project at Prof. Tsachy Weissman's lab to compare human brain image compression with state-of-the-art algorithms
- Presented research at *Stanford Compression Forum*, 2019 (https://compression.stanford.edu/human-compression)
- One of the guest lecturers at Stanford's EE 25N, undergrad introductory seminar series

STEM-Away – startup, Los Gatos, CA June 2017-Sept 2017
Summer Intern

- Worked on first version of a web-based software platform https://www.stemaway.com/ to help students with opportunity gaps launch successful STEM careers
- Designed and implemented various modules in STEM-Away, including in-built editor.

Machine Learning July 2020-Dec 2020
Self-Study

- Completed Google's Machine Learning Crash Course with TensorFlow APIs

PUBLICATIONS

Humans are still the best lossy image compressor
Co-author with Prof. Tsachy Weissman, Stanford EE Dept.

- Paper accepted in IEEE Signal Processing Society 2019 Data Compression Conference
- Presented paper in Snowbird, Utah. Abstract: https://arxiv.org/abs/1810.11137

Profiling Endogenous, Environmental, and Infectious Disease Mutational Signatures in blastic plasmacytoid dendritic cell neoplasms
Co-author with Prof. Bob Ohgami, UCSF Pathology Dept.

SKILLS AND INTERESTS

Skills: Programming (Python, Java), Building bioinformatics pipeline, Excellent verbal and written communication skills, Strong team player who can work independently.
Interests: Solving challenging technical problems, Playing soccer, Skiing, Helping under privileged people