Manan Chopra
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PROFESSIONAL SUMMARY

Fourth-year Bioinformatics major at UC San Diego pursuing an undergraduate degree and writing a senior honors thesis. Looking for exciting opportunities to expand my experience in computational biology through using new tools and methods. Experienced in producing publication-quality results efficiently and accurately.

EDUCATION

UC San Diego | La Jolla, CA **Sept. 2019 - June 2023**
Major: Biology w/ Specialization in Bioinformatics (B.S.) | **Major GPA:** 3.95
Relevant coursework: Cell Bio, General Bio Lab, Genetics, Organic Chemistry I/II, Adv. Data Structures & Algorithms, Linear Algebra/MATLAB, Calculus I/II/III, Probability & Statistics for Bioinformatics, Adv. Bioinformatics Lab, Genomic Technologies

PUBLICATIONS/PRESENTATIONS

- *Chromatin Accessibility and Transcriptional Differences in Human Stem Cell-Derived Early-Stage Retinal Organoids*, MDPI Cells, Nov 2022 (https://www.mdpi.com/2073-4409/11/21/3412)
- *Induction of Retinal Ganglion Cells through Transcription Factor Mediated Reprogramming*, UC San Diego Undergraduate Research Conference Presentation, Aug 2022 (https://github.com/recursivelymanan/UCSanDiego_URC_presentation_22/blob/main/urc22_slides.pdf)

LAB/RESEARCH EXPERIENCE

Wahlin Lab | *Undergraduate Research Assistant* | La Jolla, California **June 2021 - Present**
- Wrote data analysis pipelines using Python and R in Jupyter Notebooks to promote scientific reproducibility and produce a variety of publication-quality figures from novel datasets
- Purified target RNA from hundreds of valuable samples in order to be processed through NGS, including RNAseq, scRNAseq, PIPseq, and more
- Created and maintained WahlinLab GitHub repository with the goal of making code accessible to scientists with varying levels of experience in computational biology (https://github.com/WahlinLab)
- Wrote/revised publication-quality manuscripts
- Presented relevant papers to peers in order to facilitate discussion and improve our own scientific methods
- Held educational lab meetings using my own original curriculum with the purpose of teaching my peers how to effectively utilize Jupyter Notebooks and Python to perform data analysis for various ongoing projects

Senior Honors Thesis | *UC San Diego Department of Biological Sciences* | La Jolla, California **Sept 2022 - Present**
- *Exploration of Lineage-Traced Muller Glia Conversion to Retinal Ganglion Cells with Python and Jupyter Notebooks*

BISP 193 | Biology Education Research **June 2021 - Aug 2021**
- Performing research regarding the educational methods used to instruct students in the field of Bioinformatics, and the effectiveness of such methods, under the supervision of Dr. Katherine Petrie
- Applying the technique of coding in order to gain insights from qualitative data

SKILLS

- Python/R/Jupyter Notebook
- Git/GitHub
- Excel
- RNAseq workflow
- RNA purification
- RNAseq data analysis
- Scientific writing
- Collaboration
- Leadership