Darlene Cheong

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EXPERIENCE

PreciseDx **May 2023 – Present**
Research Associate New York, NY

- Contributed to the launch of PreciseDx's inaugural commercial product for early-stage breast cancer recurrence detection by leading large scale data analyses, establishing novel research protocols, facilitating hospital orders, and collaborating closely with senior scientists/engineers/pathologists/board of directors
- Maintained and operated advanced research equipment such as ultra-fast scanners for scanning tumor tissue slides, adhering to quality control procedures for whole slide imaging and conducting subsequent slide annotations of cell morphology
- Led a comprehensive data aggregation initiative, collaborating with 3 hospitals to consolidate breast cancer datasets comprising over 10000 de-identified patient records, resulting in establishing an integrated database to be used by PreciseDx's pathologists
- Optimized clinical data collection/data cleaning protocols using SQL and Python scripts, reducing inconsistencies in existing databases by at least 25%, thereby enhancing the reliability and accuracy of both present and future data analyses

Columbia University Irving Medical Center **June 2022 – April 2023**
Research Associate New York, NY

- Managed and trained a team of 4 researchers on experimental protocols and crafting daily presentations of visualized to be presented to other lab members, postdoctoral researchers, and the principal investigator
- Oversaw procurement of laboratory supplies by authorizing and cataloging weekly supply orders, testing for quality conditions of equipments, and ensuring proper storage, use, and disposal of hazardous materials/chemicals
- Designed and executed over 50 behavioral/molecular experiments, and processed the collected data in RStudio and MATLAB for statistical analysis which led to the completion of a three-year project in under six months.
- Assisted in preparing grant applications by writing and editing specific research aims, research significance, and a 12-month budget report, ultimately securing an annual funding from the Brain and Behavior Research Foundation

New York University Center for Genomics and Systems Biology **January 2021 – May 2022**
Honors Researcher New York, NY

- Authored an award-winning thesis investigating a novel therapeutic approach against spore forming pathogens, utilizing knowledge in research design, advanced experimental techniques, and statistical methodologies
- Leveraged proficiency in R, SQL, Microsoft Excel, and GraphPad Prism to analyze and interpret varied datasets, such as standard plate count and proteomics data, to generate evidence-based conclusions that addressed numerous research inquiries
- Trained a diverse team of master's students and undergraduates in safety procedures, laboratory practices, and equipment usage, while also securing multiple grants and presenting research findings at university-wide research conferences/research panels

DETER Project (New York University / National Science Foundation) **April 2020 – May 2021**
Researcher and Data Analyst New York, NY

- Directed research initiatives focusing on health disparities exacerbated by COVID-19 in marginalized zip codes, particularly impacting lower-income and communities of color employing both qualitative and quantitative approaches
- Conducted statistical analyses on a dataset comprising 6,199 behavior profiles from 19 healthcare facilities, uncovering correlations between economic segregation and behavioral choices during pandemics, providing insights into the social disparity of disease transmission

EDUCATION

New York University **January 2019 – May 2022**
B.A. in Biology with High Honors New York, NY
Awards and Honors: George Schwartz Prize in Biology (*Best in Research*), Dean's List, *Cum Laude*
Relevant Courses: Molecular and Cell Biology I&II, Organic Chemistry I&II, Advanced Biological Research, Biostatistics, Computer Programming, Becoming a Scientist, Honors Research Thesis & Defense, Health Policy in a Global World

THESIS AND PUBLICATIONS

"Rapid surveillance of NYC healthcare center egress behaviors during the 2020 COVID-19 lockdown"
Nature (Scientific Data), 2023

- Kirchner, T., [...] Tai, N., *et al.* Rapid surveillance of New York City healthcare center egress behaviors during the 2020 COVID-19 lockdown. *Sci Data* **10**, 795 (2023). https://doi.org/10.1038/s41597-023-02692-0

"Temporal Localization of *Bacillus subtilis* Protein Kinase A (PrkA) Uncovers Candidate Phosphorylation Substrates"
Inquiry, 2022 (Selected as the Recipient for High Honors in Biology)

SKILLS

Technical Skills: Microscopy, Histology, In Situ Hybridization, RNA/DNA isolation, DNA preparation, Tissue Imaging, Bacteriology, Animal Husbandry, R, Seurat, SQL, MATLAB, Adobe Creative Suite, Microsoft Office Suite, GraphPad Prism