

Nicholas Tse

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EDUCATION

Brandeis University

Apr. 2024 - June 2025

- MS Candidate in Bioinformatics **Online accelerated program with remote faculty; limited access to in-person research or internship opportunities**
- Relevant Coursework: Bioinformatics Scripting and Databases with Python, Biomedical Statistics with R, Cheminformatics, Computational Systems Biology

University of Massachusetts Amherst

Sep. 2017 - May 2021

- BS in Biochemistry & Molecular Biology | Commonwealth Honors College

SKILLS

Programming – R (Basic), Python (Basic), Bash (Basic), KNIME (Basic) | VSCode, RStudio

Bioinformatics Tools – BLAST, IGV, Jalview, PyMol, GEOquery, Pandas, ggplot2, RDKit, seaborn

RELEVANT PROJECTS

Structure-Based Drug Repurposing for MMP-13 Inhibition | *RBIF 110 – Brandeis University (Spring 2025)*

- Filtered and clustered ~20,000 compounds from the Broad Drug Repurposing Hub using RDKit, PCA, and K-means.
- Performed virtual screening with Smina; validated docking method with ROC AUC
- Prioritized top candidates based on docking score, binding pose, clinical status, and safety

Transcriptomic Analysis of Chronic Inflammatory Disease | *RBIF 114 – Brandeis University (Fall 2024)*

- Analyzed GSE156993 microarray data to identify differentially expressed genes (DEGs) across T2DM, dyslipidemia, and periodontitis patient subgroups
- Applied linear modeling and empirical Bayes moderation using the ‘limma’ package in R
- Performed GO and KEGG enrichment to link DEGs with inflammation, and metabolic pathways

WORK EXPERIENCE

CVS Pharmacy – Braintree, MA | *Pharmacy Technician*

Feb. 2021 – Feb. 2022; Feb. 2024 – Present

- Communicate with patients about their needs; dispense medications, ensuring dosage and instruction compliance.

ProPharma Group – Full Remote [Contract Position] | *Pharmacovigilance Specialist*

Mar. 2022 – Sep. 2022

- Crafted case narratives with Oracle Argus, adapting to evolving Standard Operating Procedures (SOPs).
- Adhered to established ICSR (Individual Case Safety Report) guidelines and MedDRA coding principles.

Quintara Biosciences – Cambridge, MA | *Sequencing Technician*

Dec. 2021 – Jan. 2022

- Conducted PCR assays on client samples to amplify genetic material; performed gel electrophoresis to assess and verify customer sample quality and quantity.

University of Massachusetts Amherst – Amherst, MA | *Research Assistant*

Ma Lab

Aug. 2020 – Dec. 2020

- Conducted computational analysis of genomes for comparative genomics studies.
- Performed genome alignment and generated phylogenetic trees, contributing insights into genetic relationships.

Skouta Lab

Jan. 2020 – May 2020

- Conducted chemical compound analysis using various techniques, including thin layer chromatography, column chromatography, and HNMR spectroscopy.
- Prepared reagent tables, reaction setup, and reaction execution, contributing to laboratory operations.