Daniel Jason Tan

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Education

University of California, Los Angeles
B.S Molecular, Cell, and Developmental Biology 2015-2019
Minor in Bioinformatics

Harvard Medical School
Masters in Biomedical Informatics 2020-Present

Selected Publications

Tan, D. J., Mitra, M., Chiu, A. M., & Coller, H. A. *Intron Retention is a robust marker of intertumoral heterogeneity in pancreatic adenocarcinoma*. npj Genomic Medicine. 2020

Experience

Bioinformatics Research Associate at California NanoSystems Institute at UCLA [September 2019- July 2020]

- Co-developed downloadable R-package for quality control and data analysis pipeline of LC-MS (liquid chromatography-mass spectrometry) metabolomics data for UCLA Metabolomics Center. https://github.com/juyeki/MetabR
- Applied computational and statistical methods to process raw mass spectrometry (metabolomics) data for hundreds of research laboratories both locally and worldwide.
- Conducted multi-phenotype and multi-omics (epigenomics and lipidomics) analysis on melanoma data using techniques such as rank-rank hypergeometric overlap, canonical correlation analysis, partial least squares regression, etc.

Undergraduate Bioinformatics Researcher at Coller Lab, Department of Molecular, Cell, and Developmental Biology, UCLA [June 2018- September 2019]

- Utilized bioinformatics methods and techniques e.g. dimensionality reduction, clustering, survival analysis, motif analysis, differential expression and differential splicing, etc on large pancreatic adenocarcinoma omics datasets (TCGA) to find clinically relevant patient clusters based on alternative splicing.
- Produced publication-ready data figures and visualizations for research paper, including heatmaps, network diagrams, t-SNE and PCA plots, violin plots, etc.
- Presented research poster at conferences such as RNA 2020 and SACB 2020.

Summer Researcher, Bruins in Genomics (B.I.G) Summer Research Program at UCLA [June 2019- September 2019]

- Highly competitive, paid, 10-week bioinformatics research program (7% acceptance rate)
- Developed various niche python-based bioinformatics tools such as a premature termination codon (PTC) search tool capable of searching for stop codons in intronic sequences across three open reading frames in FASTA files.
- Conducted R-based time-course gene expression analysis to compare gene expression profiles of wild type and gene-knockout mice cells at various time-points.

UCLA Health Ambassador, UCLA Ronald Reagan Medical Center [Dec 2017 – Dec 2018]

- Assist clinics with developing paperless, electronic health records of patient data, in addition to optimization of web interface design.
- Mentored patients on navigation of new myUCLAHealth user portal and consolidated user feedback

Awards and Accomplishments

UCLA Undergraduate Dean's List

- Achieved a GPA of 3.75 and higher in 3 academic terms.

UCLA Bioinformatics 2019 Research Award Recipient

- One of two students chosen out of 30+ students in Bioinformatics Minor.

Poster Presenter at the 25th Annual Meeting of the RNA Society (RNA 2020)

- Presentation on *Intron Retention is a robust marker of intertumoral heterogeneity in pancreatic adenocarcinoma*. https://app.oxfordabstracts.com/events/1385/program-app/submission/189937

Skills:

·Python (NumPy, SciPy, Matplotlib, Pandas, Scikit-Learn, Keras, PyTorch) ·R ·HTML ·CSS ·SQL ·Tableau ·Git ·Bash ·Parallel Computing/Big Data (MPI, OpenACC, OpenMP, Hadoop, Spark) ·AWS