Tan (Daniel) Chung

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Education

Master of Information and Data Science (MIDS)   August 2024
University of California, Berkeley

B.S. Bioengineering, Synthetic & Computational Biology Concentration   August 2020 – May 2024
University of California, Berkeley   GPA: 3.62/4.0

Research Experience

LAWRENCE BERKELEY NATIONAL LABORATORY, JBEI, Emeryville   Jan 2023 – May 2024
Computational Biology Intern
- Trained Automated Recommendation Tool (ART), an ML tool, for media optimization for flaviolin-producing *P. putida*
- Automated synthetic biology experiments using Biomek and BioLector machines to generate training data

MEDIC LIFE SCIENCES, MBC Biolabs, San Carlos   May 2021 – Sep 2021
Research Intern: www.medic-life-sciences.com
- Extracted bacterial DNA, ran gel electrophoresis and PCR for the purposes of CRISPR experiments
- Developed a bacterial library and analyzed purified DNA sequencing data with Benchling
- Evaluated and discussed new data in team meetings

MULTIMODALITY MOLECULAR IMAGING LAB, Stanford University   May 2019 – Jan 2020
Research Intern: med.stanford.edu./mips/research/mmil.html
- Synthesized nanoparticles for the development of a multiplex imaging agent observable with Raman spectroscopy
- Evaluated and analyzed nanoparticle quality with a transmission electron microscope and Nanosight
- Handled and injected mice with a preclinical imaging agent and observed under photoacoustic imaging
- Co-author in publication: *Noninvasive and Highly Multiplexed Five-Color Tumor Imaging of Near-Infrared Resonant Surface-Enhanced Raman Nanoparticles In Vivo*

Work Experience

BAYER, Berkeley   May 2023 – Aug 2023
Process Monitoring Intern, Software Development
- Developed a dashboard for Kovaltry/Jivi Cleaning Monitoring using R to automate data processing and visualization
- Developed and pitched a business proposal to the Robotic Process Automation team to increase employee productivity

SURROZEN, South San Francisco   June 2022 – Aug 2022
Discovery Biology Research Intern: www.surrozen.com
- Cultured organoids derived from mouse kidneys for experiments with Wnt-modulating antibodies
- Collected and analyzed data with tests such as ANOVA in Excel, Benchling, and GraphPad Prism
- Created graphs, charts, and figures to present my experiments and data to the company

Leadership

UNDERGRADUATE LAB AT BERKELEY, UC Berkeley   Sep 2022 – May 2023
Computational Biology Project Mentor
- Mentored four students to develop and execute a computational research project exploring the relationship between diabetes and various symptoms/diagnostic factors using Python

Skills

- Experience: Java, Python, Matlab, R, Jupyter, Git;
- Software: Excel, Adobe Acrobat, Benchling, GraphPad Prism;
- Dry Lab: NanoSight NS300, centrifuge, polarized microscope, DNA sequencing data analysis, Thermal Cycler;
- Wet Lab: Nanoparticle synthesis, titration, calculating drug concentrations, PCR, RT-qPCR, gel electrophoresis, RNA/DNA extraction, 3D organoid culture, western blot, fluorescence microscopy;

Relevant Coursework

Intro to Machine Learning for Computational Biology; Discrete Mathematics and Probability Theory; Data Structures (Java); Programming for Scientists and Engineers (Matlab); Linear Algebra; Multivariable Calculus; Engineering Molecules I/II

References

Jung Ho Yu, Rad/Molecular Imaging Program, Stanford University, (650) 796-2541, junghyu@stanford.edu
Kyuho Han, Head Researcher, Medic Life Sciences, (650) 704-2914, kyuho@medic-life-sciences.com
Yorick Post, Senior Scientist, Discovery Biology at Surrozen, yorick@surrozen.com
Camila Monchini, Process Monitoring, Bayer, camila.monchini1@bayer.com