

LIAM TAN

liam.tan@berkeley.edu

EDUCATION

University of California, Berkeley
Computer Science and Pure Mathematics

Expected 2023
Overall GPA: 4.0

EXPERIENCE

UC San Diego/WinSanTor
Software Research Intern

December 2020 - June 2021

This group sought to create a model that could take a digital biopsy slide and count the amount of nerve crossings within it in order to track diabetes patient nerve growth.

Created a nerve tracing algorithm using DBSCAN clustering as well as a receptive field to travel along the dermis boundary in order to track all full nerve crossings.

UC Berkeley
EECS 70 Reader

January 2022 - Present

Grade HW/Exams and hold office hours for the Discrete Mathematics and Probability Theory class

Previously an academic intern - helped facilitate discussion

Leonardo DRS Daylight Solutions
Software Engineering Intern

October 2019 - January 2020

Implemented K-means clustering to cluster high dimensional spectrographic wavelength data for a spectroscopy imaging microscope.

SELECTED PROJECTS

Gitlet(Java)

Built a lightweight version-control system mimicking git. Used hashing and serialization to maintain commit directories and branches. Utilized breadth first search to implement merging branches. Contains features for branching, remote usage, committing, and merging branches.

Enigma(Java)

Built a generalized simulator for the enigma cipher machine. Used aspects of object oriented programming in order to generalize alphabets and rotors. Used string manipulation and regular expressions in order to parse configuration text and run permutations. Can simulate any configuration of rotors, permutations, and alphabets.

RELEVANT COURSES

Data Structures, Advanced Algorithms, Probability and Random Processes, Convex Optimization, Proof-Based Linear Algebra, Multivariable Calculus, Differential Equations, Intro to Computer Science, Discrete Math and Probability Theory

SKILLS

Programming skills:

Java, Python, Matlab, LaTeX