

Alan Nguyen

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EDUCATION

University of California, Los Angeles

Sep 2020 – Jun 2024 (Expected)

B.S. in Computational and Systems Biology - Data Sciences

GPA: 3.879 (Dean's Honors List)

- **Relevant Coursework:** Software Construction, Data Structures & Algorithms, Discrete Mathematics, Linear Algebra and Applications, Differential Equations, Bioinformatics

WORK EXPERIENCE

UCLA Asian American Studies Center, *Incoming Frontend Developer*

July 2023

TransCanWork, *Contract Software Developer*

Oct 2022 – Present

- Develop full-stack **React** web application for nonprofit organization TransCanWork, automating employment tracker logging over 2500 transgender jobseekers and their employment journey milestones
- Convert inefficient Excel storage system using Material-UI and Bootstrap libraries and **Firebase** as a backend database to separate navigation pages such as assessment, profile, search and filter
- Translate high-fidelity **Figma** prototypes into written code, implementing application functionalities in **HTML/JavaScript** and styling in **CSS** using **Git** in an agile biweekly sprint environment

Junction of Statistics and Biology, *Machine Learning Research Assistant*

Jan 2023 – Present

- Utilize **NumPy**, **SciPy**, **pandas**, **Matplotlib** and **scikit-learn** libraries to model and display gene type frequencies using logistic regression, elastic net regression, random decision forests and F1 scores
- Engineer **Python** program investigating classification difficulty of automatic cell annotation methods, using a support vector machine to classify cells based off gene expression
- Develop and test in Python individualized simulated datasets based on known truths about gene expression and assess statistical significance of simulation results

180 Degrees Consulting, *Senior Consultant*

Jan 2022 – Jan 2023

- Program financial analysis in **Python** for urban agricultural nonprofit CropSwap LA and devise plan to combat financial decline, reducing yearly expenditures by 4% with revisions to spending plan
- Create **Excel** program for environmental impact analysis with local farm data, using results to craft white paper used by CropSwap LA to secure government and donor funding
- Present final deliverable to client's executive board detailing targeted solutions with a specific timeline

PROJECTS

DopaMind, React, CSS, JavaScript

- Code anagrams word game, generating random prompts using artificial intelligence through **Cohere API**
- Create Pomodoro timer component for user to switch back and forth between break and work time
- Implement voice transcription using **AssemblyAI** and mind map catered towards students with ADHD

BruinNotes Educational Platform, React, CSS, JavaScript

- Created registration and login system using password hashing stored in **MongoDB**
- Implemented upload, download and filter features for students to post or find study resources
- Designed and coded home page displaying study materials, post feature and search bar

SEASHarmony Matching Program, Python

- Utilized **scikit-learn's** K-means algorithm to pair 1500 incoming engineering students with mentors
- Use dozens of qualitative parameters from survey responses to create axes for optimal pairings

Pseudoalignment, Python

- Utilize **SeqIO** from the **Biopython** library to store read ID, sequence and k-mers in a hash table
- Return vector of equivalence class counts given RNA-seq data in **FASTA** format

RELEVANT SKILLS

Technical Skills: Python, JavaScript, HTML/CSS, C++, Java, R

Tools: React, VS Code, Git, Figma, Firebase, Node, Object-Oriented Programming, Linux

Interests: Crochet, hiking, LGBTQ+ rights, music theory, Spanish, clinical research, crossword puzzles