

Sahil Patil

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California, USA

SKILLS

Programming Languages: Python | C++

Frameworks: PyTorch | TensorFlow | Scikit-learn | NumPy | Matplotlib | Git | Unix

Databases: SQL | UCSC Genome Browser

EDUCATION

University of California, Berkeley

Major: Master's in Molecular Science & Software Engineering

2023-2025

Relevant Courses: Machine Learning Algorithms, Software Engineering Principles, Programming in Python/C++, Data Science

University of California, Santa Cruz

Major: Bachelors in Molecular, Cellular, and Developmental (MCD) Biology

2019-2023

Relevant Courses: Immunology, Biochemistry, Computational Biology, Cell Biology

WORK EXPERIENCE

Undergraduate Researcher, TUBI (Treehouse Undergraduate Bioinformatics Immersion)

UC Santa Cruz

Olena Morozova Vaske Lab

April 2021 - June 2021

- Analyzed gene expression data to find novel drug targets for pediatric cancer patients
- Discovered high gene variant expression on the BRAF V600 gene, meaning the person had cancer

Chemistry Tutor, Learning Support Services (LSS)

UC Santa Cruz

September 2021 – March 2022

- Created practice worksheets for students to sharpen their chemistry problem-solving skills
- Worked with course professors/TAs to structure course curriculum and make course assignments

PROJECT EXPERIENCE

- **UC Berkeley AI Hackathon**
 - Built a website that incorporated an LLM that gives users legal advice & can also generate commonly used legal documents such as NDAs, articles of incorporation, loan agreements etc.
 - Our team finished in the top 20 overall in the competition involving hundreds of teams.
- **Computer Vision Competition, Nightingale Open Science**
 - Built and trained Machine Learning models to detect Tuberculosis Bacilli from microscopic images taken of smears of respiratory sputum
- Created a tool in Python to analyze DNA and RNA codons, amino acids data, and return its corresponding values of mRNA and amino acid sequences
- Created a gene finder in Python. Returns all genes found across reading frames and in both directions as well
- Created a Python program to analyze a protein sequence, and query for components like amino acid composition, molecular weights, extinction coefficients etc. Useful for biochemistry work involving studying proteins
- Constructed a cellular automata model that models the way neurons fire and wire together in C++