DAVID BAN

djban@berkeley.edu Berkeley, California
djban 435-237-2078

EXPERIENCE

Full Stack Intern
Enable Medicine

June 2022 – August 2022 San Francisco, CA

- Developed and implemented pipeline integration for generation of cell analysis and insight
- Developed data and image analysis of cell annotations and screenings
- Created front end application in the Enable Medicine website which allows users to generate their own analysis of cell types and distances

AWS | React | Python | SQL | Image Processing | GitLab

Software Engineering Intern
Materials and Fuels Complex - Idaho National Laboratory

June 2021 – August 2021 Idaho Falls, ID

- Developed software and hardware tools to reconstruct 3-D object geometry from 1-D profile measurements
- Verified software reconstruction with data from 3D printed mock cladding
- Streamlined and packaged code for future use in analysis of nuclear fuel rod cladding

Python | Plotly | Pandas | Arduino | C++

Machine Learning / Bioinformatics Research
Computational Biology Dept of University of Pittsburgh

July 2018 – July 2020 Pittsburgh, PA

- Designed and built spatial transformer neural networks to predict protein-ligand binding
- Researched models using various metrics and visualizations
- Presented results at several science fairs and national symposiums

PyTorch | Python | Caffe | C++ | Bash | Unix/Linux

NOTABLE CLASSWORK

Linear Algebra and Differential Equations · Probability Theory · Foundations of Data Science · Designing Information Devices and Systems I-III · Data Structures · Efficient Algorithms and Intractable Problems · Machine Structures and Computer Architecture · Algorithms for Computational Biology · Operating Systems and Systems Programming

PROJECTS

BearBeats: A web-based soundboard with user customisable sounds and controls

HTML+CSS | Javascript

Gitlet: An object-oriented implementation of the control-system - a distributed version control system built from scratch.

Java

PintOS: a simple operating system framework built from scratch

C

AWARDS & ACHIEVEMENTS

U.S. Presidential Scholar
Recognized as one of two scholars from Pennsylvania who demonstrated exceptional talent and accomplishment in career and technical education fields.

National Merit Scholar
One of 8000 students distinguished for high standardized test scores

National High School Scholar of American Medical Informatics Association (AMIA)
Selected as one of the six high school to present during the AMIA Annual Symposium Conference - "Using Deep Learning with Spatial Transformations to Predict Protein-Ligand Binding"

Piano Soloist
Several notable performances including with the Utah Symphony and awards including first prize at the Pittsburgh International Piano Competition

SKILLS

Programming Languages

Python | Bash | LaTeX | Java | C++ | C | Javascript | Scheme | Arduino | HTML+CSS

Development Tools & Environment

Git | Unix/Linux | Windows | Anaconda | IntelliJ | React

Frameworks & Databases

PyTorch | Pandas | Plotly | Numpy | MatPlotLib | Matlab | Caffe | AWS | SQL

Proficient in English, Elementary Proficiency in Mandarin and French

EDUCATION

University of California, Berkeley
Major in Computer Science

2020 – Ongoing Berkeley, CA

Senior Standing in the college of Letters and Sciences