# Anirudh Bharadwaj

anibharadwaj@berkeley.edu
(510)-362-3771
github.com/themartian117
linkedin.com/in/anirudh-bharadwaj

## Education

**University of California at Berkeley,** *Intended Applied Math + Computer Science | 3.82/4 GPA* 08/2022 – present
**Tentative Coursework:** Graduate Level Real Analysis/Measure Theory, Abstract Algebra, Data Structure and Algorithms
**Previous Coursework**: Real Analysis, Discrete Mathematics, Complex Analysis, Linear Algebra and Differential Equations, Structure and Interpretation of Computer Programs

## Professional Experience

**Research Intern,** *Yu Gan Research Group* 06/2021 – 06/2022
- Worked under Professor Yu Gan and PhD candidate Xueshen Li
- Developed models to denoise OCT images with the novel CycleGANs model using Tensorflow
- Read various research papers and applied the Weierstrass metric to the GANs to improve performance
- Model is now used in the lab's medical imaging pipeline

## Projects

**Rust-NN**
A simple multi layer perceptron neural network, written in the low level language Rust
- Performs simple matrix calculations in order to feed forward data in the network
- Implemented back propagation, and activation functions
- Working optimization and loss functions

**Computational Complexity Project**
Final research paper for a Combinatorial Game Theory class
- Did extensive literature over the course of the class on the topic of computation complexity of specific games
- Exposition on proving the complexity of certain games like Go, and Hackenbush by using QBF (Quantified Boolean Formula)
- Used specific theoretical computer science concepts in order to aide the exposition

## Publications

**Non-Invasive Screen Exposure Time Assessment Using Wearable Sensor and Object Detection,** *EMBC 2022* 07/2022
- Worked on using object detection algorithms (YOLO v4) to detect screens
- Wearable sensor used to track sceen time of children in terms of "frames"
- Conducted at Professor Gan's lab, research funded by NIH grant
- Published at the Engineering in Medicine and Biology Society 2022 Conference

## Skills

**Languages:** Python, Swift, Rust
**Libraries:** Tensorflow, OpenCV, Numpy, Sci-py
**General:** Git, Linux,