Kiran Bhat

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Education

Stanford University Stanford, CA

B.S. in Computer Science, Minor in Physics *Expected June 2024*

- GPA: 3.76
- Relevant Coursework: Algorithms | Data Structures | Computer Systems | Probability for Computer Science | Discrete Mathematics | Linear Algebra & Multivariable Calculus | Machine Learning

Technical Experience

Stanford University School of Engineering Mar 2022 - Present

Computer Science Teaching Assistant *Stanford, CA*

- Instructed moderately sized groups of computer science students in the CS106 program
- Graded assignments/exams and provided feedback to students

ACMLab Oct 2021 - Dec 2021

Lab Member *Stanford, CA*

- Developed machine learning model in Python to determine average income based on satellite images of a neighborhood
- Utilized PyTorch to implement a 6-layer convolutional neural network (CNN) architecture
- Achieved 3rd best validation loss out of Stanford teams who completed the project

AVEVA Jun 2019 - Jul 2019

Software Engineering Intern *San Leandro, CA*

- Led project to create a real-time, weight-based inventory management system using company software
- Constructed weight sensors and wrote Python code on Raspberry Pi to collect and upload weight data
- Created online, real-time visualization of the quantity of snacks in kitchenette snack bins as proof of concept
- Delivered various presentations, such as project pitch, weekly progress updates, and final project showcase

AVEVA Jun 2018 - Jul 2018

Software Engineering Intern *San Leandro, CA*

- Modified Python code of 4 retro video games to use real-time data to influence game mechanics
- Utilized REST API to relay data from company data management system into the retro games
- Wrote Python script to automate weekly time sheet entries for interns

Projects

The Trebled C May 2022 - June 2022

- Created Unity 2D platformer game to train pitch interval recognition
- Programmed MIDI piano input to enable more natural player interaction
- Coded dynamic jumping/block placement dependent on pitch to allow for expandable level generation

Arduino LED Display + Tetris Feb 2022 - March 2022

- Designed and built 8x8 LED array controlled by Arduino, programmed display to support variable brightness
- Programmed Tetris clone with main features and custom animations

Speed Reader Feb 2022 - Present

- Created a ReactJS app that can improve reading speed by up to 100% by reducing subvocalization
- Researched web scraping functionality and converting web app to a chrome extension

Composer Predictor Nov 2021 - Dec 2021

- Applied multinomial probability theory in Python to identify the composer of a piano piece
- Generated probability maps containing the probability of any given note being written by Bach or Mozart
- Built probability maps to compute log-likelihood ratio and predict the composer of a given MIDI file

Music Composition Jun 2009 - Present

- Composed over 20 musical pieces, including scores for a short film and The Trebled C

Languages and Technologies

- C++ | Python | C | C# | Java | JavaScript | HTML | CSS
- Git | Unix | Terminal | LaTeX | Bootstrap | IntelliJ | VS Code | GSuite | Microsoft Office | Logic Pro X