Steven Li

San Jose, California

(408)-841-1213 | listeven8841@gmail.com | itz-shiny | steven-li-a21b84ba

Skills

Programming Python, Java, C++, C#, Mathematica, Node.js, LaTeX, SQLite, Flask, SQL, MATLAB, Unity
Web HTML5, CSS, JavaScript, PHP, MySQL, AWS
Languages English, Cantonese (oral)
Other LabView, LTspice, EAGLE, SOLIDWORKS, Soldering, Bioinformatics

Education

San Jose State University

San Jose, California

Bachelor of Arts in Physics & Minor in Computer Science | 3.4 Overall GPA

Aug. 2015 - May. 2019

Experience

Undergraduate Research, Optics (Prof. Christopher Smallwood) at SJSU

San Jose, United States

Researcher

Aug. 2018 - May. 2019

- Designed & constructed a prototype of a high frequency photo-detector that detects and corrects for room variations in optical spectroscopy experiments of novel solid-state materials.
- Reduced original circuit design dimensions by 50% allowing the device to be more compact and flexible.

Projects

Machine Learning Classification of Foreground Dwarfs and Background Giants in the Perseus Cluster

San Jose State University, USA

Topics in Modern Astrophysics - Research on Galaxies and Dark Matter Final Project

May. 2019

- Collected known data on galaxies in the Perseus and nearby clusters NGC 383 & 507 and catalogued them into a foreground & background data sets.
- Performed SVM on both collected data sets to construct a model to discriminate between them using unconventional and non-obvious relationship data points.

Audio Signal Frequency Dependent Spectrum Analyzer

San Jose State University, USA

Intermediate Physics Laboratory - Electronics & Data Acquisition Final Project

May. 2019

- Circuit device simulated in LTspice and constructed to take an audio signal and split it into low and high frequency bands which are quantified and visualized by LED level indicators.

Exhaustive Algorithm Approach to tRNA Secondary Structure Prediction

San Jose State University, USA

Bioinformatics I Final Project | Programmer

May. 2019

- Developed and launched a server-side web application with a PHP back-end and MaterializeCSS front-end hosted on AWS EC2
- Application implements a brute-force algorithm constructed specifically to predict the most probable tRNA secondary structures pairings.

Paper Warriors

San Jose State University, USA

Introduction to Game Studies - Videogame Group Final Project | Producer & Secondary Programmer

Dec. 2018

- Simple fighting game centered around Rock-Paper-Scissors type of attacks as a core mechanic featuring three playable stages, characters and soundtracks made in Unity.
- Planned and coordinated the development flow and direction of the game's content and mechanics alongside being the secondary developer.

Ultrasonic Thermometer Proof of Concept & Performance Benchmark

San Jose State University, USA

Methods of Research & Communication in Physics Final Project

May. 2018

- Explored the theory of a Ultrasonic Thermometer and constructed a proof-of-concept from an Arduino and an ultrasonic sensor.
- Benchmarked efficiency, accuracy and precision of Ultrasonic Thermometer against conventional counterparts and analyzed potential technological use cases.

Sun's Evolutionary Process into a Red Giant Simulation

San Jose State University, USA

Computational Methods in Physics Final Project

Dec. 2017

- Conducted the simulation by modeling the sun as a non-rotating spherically symmetric object, an ideal gas, and a black-body isolated from any unexpected interaction that may change it's stellar evolution in Python
- Tracked the sun's physical properties as it underwent stellar evolution while maintaining hydrostatic equilibrium that governs the star.