

# Ze Yuan (Gavin) Zhang

6340 Main St., Houston, TX 77005 | gavin.zhang@rice.edu | zeyuanzhang.com | 832 838 1157

## EDUCATION

### Rice University (2019-2023)

Houston, TX

*Bachelor of Science in Computer Science, Bachelor of Arts in Applied Mathematics, Minor in Business*

- President's Honor Roll (3.92 GPA)

### West Point Grey Academy (2014-2019)

Vancouver, BC

*BC Dogwood High School Diploma*

- ACT Composite Score: 36

## TECHNICAL SKILLS & COURSEWORK

**Software Engineering:** Python, Java, HTML, CSS, Javascript, Flask, SQLite, MATLAB, Git

**Relevant Coursework:** Data Structures and Algorithms, Discrete Mathematics, Program Design, Neural Networks, Clustering Algorithms, Linear Algebra, Operations Research

## TEAM EXPERIENCE

### Group-based Distraction Blocker

Dec 2020 | Vancouver, BC

- In a team of 3, created a chrome extension notifying users in the same room when one user is distracted
- Individually coded front-end interface, tracking and communicating info with Flask server via socket.io
- Collaborated in writing Flask server communicating with rooms, detecting if user is distracted via comparing URLs they visit with a list of distracting websites

### Research Assistant for Dr. Peter J. Varman

Feb 2020 - Aug 2020 | Houston, TX

- Contributed to implementing Fair-EDF, an earliest-deadline-first request scheduler seeking to fulfill the same percentage of requests from different clients
- Predicted SSD response times with a decision tree with 4 nodes per branch in MATLAB
- Accomplished fast training (0.14s on a training set of 5000+ requests, 52000 observations/second) with a 15% error on average on a YACSIM simulated SSD

### Analyst, Rice Undergraduate Investment Fund

Sep 2019 - Dec 2020 | Houston, TX

- Protected return of 44% on stock CLB by pitching to hold rather than sell in the Energy sector
- Pitch to buy and sell stocks by working with team on qualitative research, quantitative analysis (DCF)

### Web Designer & General Manager, UNA Community Youth Band

Apr 2016 - 2019 | Vancouver, BC

- Designed and updated website unayouthband.org
- Organized 12 concerts, the rehearsal venue, and distribution of volunteer hours to 20+ students

## INDIVIDUAL PROJECTS

### Digital Alternative Guitar Loop Pedal

Dec 2020 - Present

- Created a loop pedal web-app compatible with any guitar using Javascript
- Optimizing timing of recordings and adding mobile compatibility using Tone.js

### Personal Portfolio Website

Dec 2020

- Created a responsive website using Bootstrap, jQuery, Modernizr, etc.

### Test Set Generator for Python Programs

Aug - Nov 2020

- Wrote a Java program to generate a concise set of test cases to catch buggy implementations of a function
- Used recursion to parse config files, generate objects for test cases, greedy algorithm finding minimal hitting set to remove redundant tests
- Wrote extensive black-box, white-box test-suite to ensure the correctness of generator

### Bluetooth Controllable Table Tennis Serving Robot

Jun - Jul 2020

- Produced table tennis serving robot with an app to configure hitting patterns, spins, speeds
- Created an Arduino program and mobile controller application
- Designed a custom circuit using DC and Servo motors, and H-Bridges

## ADDITIONAL

### Honors & Awards:

British Columbia Achievement Scholarship (Top 8000 in province for cumulative GPA) 2019

PVG Tuition Award for Academic Excellence (Top 4 in grade for high school GPA) 2019

3rd Place, Distinguished Speaker, WPGA Global Affairs Debate Tournament (Regional) 2018

First Place, \$5000 CAD grant for a local non-profit, Youth and Philanthropy Initiative (National) 2017

**References:** Available upon request