# Zifan(Ivan) Gu

429 N Church St,
Spartanburg, SC, 29303
**864-308-7279**
**guz@wofford.edu**
**zifangu.github.io**

## EDUCATION

**Wofford College,** Spartanburg, SC                     09/2018 -
Major: Computer Science                     Minor: Physics, Mathematics
Emphasis: Computational Science     GPA (Overall): 3.86 (Major): 3.96  GRE: 328

## EXPERIENCE

**Wofford College,** Spartanburg, SC — *Teaching Assistant*  02/2019 -
Mentor: Steven Zides, Li Kinnison
- Assist first-year engineering students to conduct experiments including gravity, friction, pendulum, fluid dynamics.
- Proofreading essays, correct pronunciation, and expand the cultural context behind certain phrases for Chinese majors.

**Sunyard Digital Technology Co.,** Hangzhou, China — *Software Engineer Intern*                     07/2019 - 08/2019
Mentor: Shenpu Xu
- Assigned authorization levels to organizations to ensure hierarchy.
- Updated the internal work journal software to map each entry with that personnel's assigned task.

## PROJECTS

**Heart Rate Variability Among College Students**          09/2020 -
Mentor: Carolyn Martsberger
- Analyzing the hearts' responses when encountering different images using modified root mean square methods in Matlab.
- Establishing a correlation between high memory and high heart rate fluctuations.
- Study findings are in preprint for *Frontiers in Physiology.*

**Heart Rate Variability in Amphibians**          11/2020 -
Mentor: Carolyn Martsberger
- Collect RR interval data on frogs for analysis with Arduino.
- Measure voltage across frog hearts with pulled glass capillary tubes.

**Machi Koro Board Game Digitalization**          09/2020 -
- Implemented Observer listener pattern to handle card activations.
- Adapted an Agile approach with test-driven development and two-week-long sprints.

**Modeling and Simulation Projects**          09/2020 - 11/2020
- Applied data visualization with constrained canopy growth, SIR(SARS 2002), and agent-based diene addition in R/RMarkdown.

**Supervised Learning on League of Legends**          06/2020 - 08/2020
Mentor: Beau Christ
- Used step-wise regression and Naive Bayes Model to predict the result of 10,000 ranked games of League of Legends.
- Pruned decision trees to produce 5 deciding factors from 38

## SKILLS

Java, MatLab, Python, C++, C, R, MySql, Git, AWS, RPG(AS400)

## ADDITIONAL LEARNING

**JPMorgan Chase and Co. Virtual Experience Program Participant (Summer 2020)**
Displayed data visually for traders. Use JPMorgan Chase frameworks and tools to interface with a stock price data feed.

**Datacamp Supervised Learning in R: Classification (Summer 2020)**

**AT&T Wireless Technology Series Participant (Fall 2020)**
Discussed 5G, Mobility Security/Network, Automation, RAN.

## HONORS AND LEADERSHIP

**Dean's List (2018-2020)**

**Benjamin Wofford Scholar (2018)**

**President of Beta Beta Beta (National Biological Science Honor Society) (2018-Present)**

**Treasurer of Alpha Phi Omega (National Service Fraternity) (2020-Present)**

## LANGUAGES

**Chinese**(native)

**English**(fluent)

## COMMUNITY INVOLVEMENT

**Alpha Phi Omega**
Packed Halloween candy bags for elementary students. Hiked and maintained the trail in Came Croft State Park.

## COVID-19 Database Inquiry
04/2020 - 05/2020

- Deployed Flask service and constructed an AJAX web client from Johns Hopkins University Database.
- Used MySQL behind the client page to show active cases, deaths, and hospital beds available versus capacities in a region.

## Research Paper: Physics and Medical Application of MRI
10/2019 - 12/2019

- Examining the history, principles, and applications of Magnetic Resonance Imaging in cardiology and oncology.

**Habitat for Humanity**

Build safe and affordable houses by working over 20 hours per week during January 2020.

**Beaumont United Methodist Church**

Assisted middle school students on their homework assignments and joined after school activities weekly