

# Reggie (Hong) Yiu Zheng

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Portfolio: hongzheng24.github.io/portfolio/

## EDUCATION

**Brown University**, Sc.B in Applied Mathematics-Computer Science, 3.57/4.00 GPA Providence, RI | Class of 2024

- Relevant Courses: Machine Learning, Computer Vision, Software Engineering, User Interface and User Experience

**Mississippi School for Mathematics and Science (MSMS)**, 4.00/4.00 GPA Columbus, MS | Class of 2020

## JOB EXPERIENCE

**Computer Science and Mathematics Instructor**, Juni Learning San Francisco, CA (Remote) | May 2022 – Present

- Execute advanced mathematics and computer science lesson plans from AP Calculus to Python Level 3 over Zoom for students ages 8-18 while adapting to student pace, interests, and needs
- Communicate with parents regularly, providing updates on student progress and results from assessments
- Maintain thorough records for each student, covering multiple courses, skill progression, and projects

**Web Editor and Event Coordinator**, Zeta Delta Xi Providence, RI | Jan 2021 – Present

- Modernize and maintain the Zeta Delta Xi website and design eye-catching posters for 10+ events
- Foster an LGBTQ-friendly space at Brown University by organizing 20+ events such as the Trans and Nonbinary Ice Cream Social, QTPOC Potluck, and the FGLi Brunch

**Applied Mathematics Undergraduate Teaching Assistant**, Brown University Providence, RI | Aug 2021 – Present

- Undergraduate teaching assistant for APMA 0360: Applied Partial Differential Equations
- Administer 2 weekly office hours and answer questions on the virtual platform Ed to guide students through assignments
- Grade 100+ weekly homework assignments and exams while providing feedback

## PROJECTS

**Iterative Dichotomiser 3 (ID3) Algorithm and Visualizer**, Brown University Providence, RI | Jun 2021 – Mar 2023

- Implemented, in Python, the Iterative Dichotomiser machine learning algorithm and visualizer to create the most optimal decision tree given training data by calculating the information gain and entropy of features
- Trained algorithm on datasets to produce models such as a model to determine if an email is spam and a model to determine if a given current state of a chess board has a winning move
- Implemented a pruning algorithm to remove tree nodes using validation data in order to avoid overfitting

**Better Brown University**, Brown University Providence, RI | Jan 2022 – May 2022

- Developed, in a team, the Better Brown University website with functionalities such as a crowd-sourced event calendar and an algorithm that calculates how busy a campus location is
- Worked on frontend web design, backend database storage, backend algorithms, graphic design, data collection, and testing using TypeScript, React, HTML & CSS, and Selenium

**Seam Carving Algorithm and Visualizer**, Brown University Providence, RI | Jun 2021 – Aug 2021

- Programmed, in Java, a seam carving algorithm and visualizer for content-aware image resizing that removes paths of pixels by calculating least importance based on deviance in RGB color value from neighbor pixels

## LEADERSHIP EXPERIENCE

**Out in Computer Science (Spectrum)**, Co-President and Event Coordinator Providence, RI | Aug 2021 – Present

- Hosted 10+ social events to encourage LGBTQ+ programmers to connect with each other and to foster an inclusive space for queer and transgender people in computer science

**International Culture Festival Committee**, Co-Founder and Co-President Columbus, MS | Aug 2018 – May 2020

- Co-founded and organized the biannual International Culture Festival which seeks to bring together people of unique backgrounds and cultures through food, activities, and more

## SKILLS

React, Machine Learning, JavaScript, TypeScript, Python, Java, HTML & CSS, Praat, Figma, LaTeX