Garrett Gu

(469) 314 4782 | gu@utexas.edu
github.com/garrettgu10

SKILLS

Languages
– Proficient in Java, git, JavaScript, and C
– Familiar with bash, Python, C++, PHP, and SQL

Frameworks
– Express.js, Meteor.js, React.js, React Native, React 360 (formerly React VR), Qt

Competitive Programming
– Won multiple UT-wide programming and Capture-the-Flag competitions
– USA Computing Olympiad (USACO) Platinum Qualifier
– HackerRank Gold Problem Solving badge

EDUCATION

The University of Texas at Austin 2018 - 2021
B.S. in Computer Science (Honors)
GPA: **4.0**

– Member of **Turing Scholars** Honors Program
– Coursework: Architecture, Data Structures, Competitive Programming, Probability, Discrete Math
– Transferred Coursework: Intro to Systems Programming, Linear Algebra, Differential Equations I, II

EXPERIENCE

UT Information and Systems Security Society   2018 - Present
Engineering Officer
– Created Capture-the-Flag cybersecurity challenges for biweekly competitions for over 100 contestants on average
– Optimized LAMP services to handle many simultaneous penetration attempts
– Prepared talks over security techniques and best practices, including CSRF, XSS, injection, brute force, digital forensics

Physics Department, SMU   2016 - 2017
Student researcher under Dr. Jingbo Ye
– Enhanced a 3D robotic arm by producing counterweights for height retention and created an intuitive front-end user interface using **Java Swing** for smooth operation
– Co-created a **Electron/WebGL** program used to visualize CMOS sensor data to aid detection of subatomic particles

Forward Tutoring   2017 - 2018
Online live tutoring platform   **JavaScript**
– Built from scratch a new online tutoring platform using **Meteor** and **React**, leading to a ~**140% increase** in user registrations
– Coordinated the automated selection and scheduling of volunteer tutors, allowing a ~**50% increase** in tutoring availability and a ~**290% increase** in tutor engagement

PROJECTS

Carma   2019
Hands-free car-to-car communication   **React Native**
– Used the **SmartCar API** to track vehicle locations and characteristics, allowing drivers to dictate messages to specific nearby vehicles through **Google Cloud** Text-to-Speech and Speech-to-Text APIs

TetrisBrain   2018
Tetris implementation and AI   **Java**
– Used a **genetic algorithm** to generate a greedy AI to play Tetris with the goal of long term survival
– Able to clear hundreds of thousands of lines in one game