

# Emran Shafaq

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## Education

### **B.S., COMPUTER SCIENCE | B.S., MATHEMATICS | MAY 2019 | THE UNIVERSITY OF TEXAS AT AUSTIN**

- GPA: 3.27
- Relevant Computer Science Coursework: Data Structures, Computer Architecture, Operating Systems, Software Engineering, Intro to Security, Generic Programming and the STL, Android App Development
- Relevant Math Coursework: Differential Equations, Linear Algebra, Algebraic Structures, Complex Analysis

## Experience

### **LEAD WEB DEVELOPER | CENTER FOR CARDIOVASCULAR SIMULATION | MAY 2017**

- Develop and maintain wiki site for the Center for Cardiovascular Simulation in the Institute for Computational Engineering and Sciences at UT Austin
- Uses Django and PostgreSQL for backend and databasing
- Uses React and Bootstrap for frontend

## Notable Projects

### **NOVEMBER SKY | OCTOBER 2016**

- 2nd place winner at HackTX 2016
- Rocket simulator that requires the user to manually program the rocket's actions in JavaScript
- Teaches basic programming to individuals with minimal experience in a fun, intuitive way
- Uses Pixi.js for graphics rendering and matter.js as physics engine

### **BOSWEMIAN RHAPSODY | SPRING 2017**

- Database site with five teammates to categorize music, using the Spotify API
- Generated RESTful API to extract song/artist/album information from the database.
- Utilizes Flask for backend, React for frontend, PostgreSQL and SQLAlchemy for databasing, Travis CI and GitHub for project integration and version control

### **MANDELJS | SUMMER 2017**

- Mandelbrot set viewer based in JavaScript
- Includes multi-threading, multi-sampling, export options, and smooth zooming/panning
- Additional features include rendering options and Julia set generation

### **TWILYSIS | SUMMER 2017**

- Final project for Android Development course
- Uses Android Twitter API and IBM Watson to analyze personality traits using a user's most recent tweets
- Written in Java, XML

## Other Projects

- Recreation of the AES Encryption Algorithm | Java
- Steganography Image Encoder | Java
- Basic Bash Shell | C
- Recreation of Boost Graph Library | C++
- Password Cracker | Java
- Recreation of std::deque | C++

## Skills

- Proficient in C++, Python
- Familiar with JavaScript, C, Java
- Exposure to Lisp, Haskell, Swift
- Familiar with Django and Flask
- Familiar with Docker and Google Cloud Platform
- Familiar with Travis CI and git

## Extracurricular

### **HUM A CAPPELLA | FALL 2016 - PRESENT**

- Bass singer for collegiate South Asian fusion a cappella team
- Perform at concerts and competitions around the country

### **91.7 KVRX AUSTIN | SPRING 2017 - PRESENT**

- DJ for University radio station
- Host one hour show once a week for HD and FM listeners