RAYMOND YUAN

ry11@rice.edu ▪ 281-875-5740 ▪ 3006 Eastside St. Houston, TX 77098

EDUCATION

Rice University, Houston, TX   President's Honor Roll – Fall 2015, Spring 2016   May 2019
      Bachelor of Science in **Computer Science**   Cum. GPA: 3.90/4.00

Relevant Coursework: Statistical Machine Learning, Stanford Machine Learning (Coursera), Fundamentals of Parallel Programming, Introduction to Computer Systems, Multivariable Calculus, Linear Algebra, Probability and Statistics, Introduction to Program Design, Algorithmic Thinking, Fundamentals of Computer Engineering, Differential Equations and Linear Algebra

---

TECHNICAL SKILLS

- **Software: Fluent in** Python, Wolfram Mathematica; **Proficient in:** Matlab, HTML, C, C#, and Java
- **Frameworks:** Android Studio, Unity3D, Arduino, Eagle PCB Design, Soldering, Git

---

EXPERIENCE

Neosensory, *Applications Engineer Intern*, Houston, Texas   May 2016 - Present
- Developed algorithms for music "sensationalizer," which included **beat detection**, **adaptive quantization**, Fourier transforms of music. Prototyped the algorithm in Python and wrote it in C for real-time application.
- Built apps in **Android Studio** (using Java) and **Unity3D** (using C#), coded microcontroller in **Arduino** to control firmware.
- Performed scientific experiments to determine best implementation for applications, performed statistical analysis, wrote technical memos.

PROJECTS

Cats vs. Dogs Image Classification   January 2017
- Created image classification model to detect cats vs dogs using **convolutional neural networks,** implemented in **Keras** and **VGG16** architecture. Achieved >99% accuracy on test data.

Handwriting Recognition using Artificial Neural Net   December 2016
- Implemented regularized neural network in Matlab to predict handwriting digits, using **feedforward propagation** and **backpropagation algorithm** (Self wrote algorithm). Verified results with gradient checking, K-Fold cross validation.

Motivate Me: HackRice 2016   October 2016
- Created a social, organizational, and motivational app that encourages you and others to work towards a shared goal though competition. Uses **Firebase API** to dynamically update databases.
- Implemented a seamless interaction between the frontend (using **HTML** and **CSS**) and backend in **Javascript**. Wrote the infrastructure that controlled the backend portion of storing and updating information.

Spotify Artist Playlist Connector   July 2016 - Present
- Wrote an algorithm that utilizes **breadth-first search** as graph exploration to generate a graph of all Spotify artists to generate a playlist based on the shortest path between any number of artists using **A-Star** graph exploration. Shows how music can change from a certain artist's style to another given certain influences.

LEADERSHIP AND ACTIVITIES

Rice University Cloud 9 Ultimate Frisbee Team   August 2016 - Present
- *Fitness Officer:* Lead and organize entire team warm up every practice. Coordinate and design external practice workouts, routines, and drills.

Kaggle Club   January 2017 - Present
- Lung cancer detection, using scans of lungs. Work in a team to solve Kaggle challenges.

Auxiliary Activities: Play for the Houston Ultimate Frisbee Team Space City Ignite; Rice Owls Wrestling; Rice Computer Science Club; and Assistant Wrestling Coach at St. John's High School