Last Edited: 8.25.2017

RAYMOND YUAN

ry11@rice.edu ▪ 281-875-5740 ▪ 3006 Eastside St. Houston, TX 77098
Github ▪ Personal Portfolio Site ▪ LinkedIn

EDUCATION

Rice University, Houston, TX — President's Honor Roll – Fall 2015, Spring 2016 — May 2019
Bachelor of Science in **Computer Science, Mathematics** — Cum. GPA: 3.86/4.00

Relevant Coursework: Algebraic Geometry, Introduction to Deep Learning (Graduate Level), Reasoning about Algorithms, Advanced Object-Oriented Programming and Design, Artificial Intelligence (Udacity NanoDegree), Statistical Machine Learning (Graduate Level), Stanford Machine Learning (Coursera), Fundamentals of Parallel Programming, Introduction to Computer Systems, Probability and Statistics, Algorithmic Thinking, Differential Equations and Linear Algebra

TECHNICAL SKILLS

- **Software: Fluent in** Python, Wolfram Mathematica, Java; **Proficient in:** Matlab, HTML, C, C#
- **Frameworks:** Tensorflow, Keras, Git, Android Studio, Unity3D, Arduino, Soldering (SMD, through-hole)

EXPERIENCE

NeoSensory, Inc. — *Algorithms Engineer,* Palo Alto, CA — May 2017 - Present

- Implemented audio preprocessing libraries in **Tensorflow** complete with end to end unit testing**.** Incorporated with phoneme classification model for increased accuracy.
- Wrote **deep auto-encoder** audio to haptic conversion algorithm in **Tensorflow** and **Keras** to optimize algorithm. Increased reconstruction accuracy by **83%.** Converted algorithm to **Android** to run inference in real time.
- Created and wrote framework for realtime phoneme classification in python and **Tensorflow.** Implemented quantization and other techniques to allow phoneme classification model to run in realtime.
- Featured in National Geographic for work on infant haptic environmental sound algorithm (to be released in 2018)

NeoSensory, Inc. — *Applications Engineer*, Houston, TX — May 2016 - January 2017

- 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 firmware in **Arduino.**
- Performed scientific experiments to determine best implementation for applications, performed statistical analysis, wrote technical memos, and presented on technical projects. Presented prototype and design to Global Fortune 100 company in Japan.

PROJECTS

Image Classification on StreetView House Numbers (SVHN) — April 2017

- Placed **1st** in in-class **Kaggle** Competition, with accuracy of **98.71%**, using ensemble of **Wide ResNet** models, which is better than State of the Art single models. Also tried **Maxout Networks** and deep, simple Convolution Neural Nets. Implemented in **Keras**.

Image Classification on CIFAR-10 using Convolution Neural Network — April 2017

- Implemented entire convolutional neural network from scratch in **python** (wrote all layers: **convolution**, **activations**, **pooling**, **dropout**, etc.) using **feedforward** propagation and the **back propagation** algorithm.

LEADERSHIP AND ACTIVITIES

External Vice President - Rice University CS Club — May 2017 - Present

- Manage communications with companies and outside organizations and coordinate events for them to connect students with technology opportunities.
- Design new ways to bring students together through their mutual passion for technology

Hack Rice Communications Committee - Rice University Hackathon — May 2017 - Present

- Communicate with external companies, applicants, organize reimbursement logging.

Fitness Officer - Rice University Cloud 9 Ultimate Frisbee Team — August 2016 - Present

- Lead and organize entire team warm up every practice. Coordinate and design practice workouts, routines, and drills.

Activities: Kaggle competitions, Houston's Ultimate Frisbee, Assistant Wrestling Coach at St. John's High School