Tony Ren

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Education:

Rice University - Houston, TX

M.S. in Bioengineering, 2018 *Graduate GPA: 3.74*

Statistical Machine Learning, Bioinformatics, Numerical Methods, Computational Biology, Instrumentation, Computational Methods

B.S.E in Bioengineering, 2017 *Undergraduate GPA: 3.73*

Skills:

Technical Languages: Python (NumPy, Pandas, Matplotlib), JavaScript, SQL, HTML, CSS, R, MATLAB, Java, TensorFlow
Analytics: Machine Learning, Deep Learning, AB Testing, NLP, Data Visualization, Random Forest, Clustering, Regression

Work Experience:

Epic Systems Corporation *August 2018 - Present*

Technical Services Engineer

- Developed software utilities to query our internal databases to help clients implement LOINC and SNOMED codes per regulations, speeding up review for requirements by 50%
- Pioneered new interfacing with specialty diagnostic labs, analyzed processes and developed software to improve efficiency by 50% with new workflows
- Analyzed code to help troubleshoot software and served as a liaison between hospital operational leadership, successfully improving user software usage efficiency by 40% across three different large hospital systems, increasing customer satisfaction ratings by 25%
- Wrote and helped 10+ clients troubleshoot SQL queries utilizing our database schemas, helping develop 50+ reports on key laboratory operational metrics to identify actionable areas of improvement and obtain 100% CAP accreditation with our software

Blumio *January 2018 – May 2018*

Data Intern

- Developed data pipeline for analyzing heart rate data to identify various potential models for successful grant applications
- Performed exploratory data analysis to look for quantifiable trends using Python, kNN modeling, random forest classifications, and machine learning with 80% accuracy in predicting future test data

Memorial Sloan Kettering Cancer Center *May 2016 – August 2016*

Research Intern

- Pioneered the use of R to help process 100+ dimensional data sets of patients for prostate cancer clinical trial eligibility and to evaluate clinical trial results, expediting drug and screening test development in the lab
- Analyzed clinical data from 1000+ patients to determine whether blood-based testing can supplement tissue biopsies in prostate cancer, exploring novel therapy options for cancer patients
- Developed data pipeline to identify samples for sale, resulting in $2M dollars of revenue from sales in a 2 week timespan, offloading the entire team's workload for the month

Texas Children's Hospital *May 2015 – August 2015*

Research Intern

- Performed statistical analysis using R on a 1000+ dimensional database mRNA and miRNA expression data to elucidate the mechanisms behind the cancer, utilizing clustering and regression to analyze data and discovering a novel miRNA pathway

Project Experience

Full Stack Application - Recipe Picker *March 2022 - August 2022*

- Developed full stack application to select random recipes for dinner utilizing PostgreSQL, Node.js, Express, and React

Personal Website *January 2022 - August 2022*

- Created personal website using Python, Flask, and Frozen-Flask to create a static webpage hosted using Netlify

2018 Data Science Bowl (bronze medal) *March 2018 – April 2018*

- Performed exploratory data analysis to explore AI-vision driven segmentation tasks to identify model direction
- Developed and tuned machine learning model using Python, Google CoLabs, TensorFlow, NumPy and Pandas to analyze cell nuclei based on image segmentation, achieving bronze medal status for a Mask-RCNN ensemble deep learning model

Full Stack Project – Arduino Microcontrollers *August 2016 – December 2016*

- Developed smart wearable pedometer with time keeping and logging capabilities utilizing an Arduino and Raspberry Pi

Android Application Project *January 2014 – May 2014*

- Led the design and programming team for a mobile wardrobe application on Android for Down Syndrome children, serving as the primary programmer for the application architecture, camera functionality, and graphical user interface, creating a working Android application within one semester
- Constructed SQLite databases to store and load data to successfully integrate with the Android application