Tony Ren

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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%
- Analyzed return on interest utilizing R to successfully identify key financial metrics of our software, driving future development and improving Epic's market share of clients utilizing our laboratory information system
- 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%
- Led direction of development for discrete microbiology HL7 interfacing with Epic Systems with major reference labs such as Quest and LabCorp, fixing a key pain point shared by 100+ of mutual customers
- 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
- Taught and mentored clients and new employees to improve their usage of our software, empowering 3 separate teams of 3, 5 and 11 analysts to be self-sufficient experts in the software to manage their own software systems
- Deployed new use of our software in two separate hospital systems, assisting with 10+ successful deployments for the lab

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 model data and discovering a novel miRNA pathway

PROJECTS

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

Computational Modeling Project *August 2014 – December 2014*
- Created a computational model of the lungs as lead programmer on a team of 8 to facilitate medical device development

Full Stack Design Project – Android Application *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

EDUCATION

Rice University - Houston, TX
M.S. in Bioengineering, 2018   Graduate GPA: 3.74
B.S.E in Bioengineering, 2017   Undergraduate GPA: 3.73

SKILLS

Technical Languages: Python (NumPy, Scikit-learn, Pandas, Scikit-learn, Matplotlib, Jupyter), R, MATLAB, SQL, Java, C++
Languages: English, Mandarin Chinese