Robin Ronson

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EDUCATION

TEXAS TECH UNIVERSITY
BS in Computer Science
December 2018 | Lubbock, TX
College of Engineering
GPA: 3.9 / 4.0

LINKS

Github:// **robrons**
LinkedIn:// **robinronson**
Portfolio:// **robrons.github.io**

COURSEWORK

Operating Systems
Intro. to Artificial Intelligence
Bioinformatics
(Research Asst.)
Machine Learning
(Special Topics in CS)
Theory Of Automata
Discrete Computational Structures
Object-Oriented Programming

SKILLS

PROGRAMMING

Proficient:
Java • Python • HTML • CSS • JavaScript

Familiar:
C • C++ • Assembly • R • Bash

Frameworks and tools:
Android Studio • MySQL • ReactJS • UNIX • MongoDB • REST • Google Cloud Platform • Redux

CONFERENCES

DMTF Technical Symposium
Topic: Performance gains in Redfish Conformance Checker Tool

DISCL Research Seminar
Topic: Speaker on RESTful API testing and inference

EXPERIENCE

TEXAS TECH HPCC | Student Software Developer

Jan 2018 - Present | Lubbock, TX

- Upgraded a **Python**-based, API-driven **test automation** tool for **Redfish®**
- Developed a caching mechanism to store **HTTP** GET requests using **JSON** serialization, resulting in a ≈ 50x speed improvement over the existing tool
- Rebuilt the tool's log representation feature using **Angular** and **Material Design**, which led the easier identification of assertion failures

TTU BIOLOGICAL SCIENCES DEPARTMENT | Researcher

May 2017 – Present | Lubbock, TX

- Working with **Prof. Amanda M.V. Brown** to create **DNAngler**, a **Java** pipeline allowing users to predict trajectories of infectious diseases
- Reduced the dimensionality of DNA under mutagenesis dataset using t-SNE, resulting in a clarified visualization of malignant metastasis with **TensorBoard**
- Wrote **Bash** script for constructing a 2D matrix of allele frequency vs. point mutation for transition analysis

PROJECTS

FREEZE-B-GONE | Temperature Monitoring PWA

- Utilized **ReactJS** and **Redux** for building the **front-end** side of a web application that monitors temperature near water pipes
- Set up **push notifications** using service worker API for vital freeze warnings
- Established **WebSocket** connection between the web app and server for real time monitoring of the temperature registered by the Raspberry Pi device

GRATIS-SPOT | WiFi Hotspot Tracker

- Queried Socrata Open Data API, resulting in a 20% increase in detection of free public WiFi coordinates, in comparison to current standards
- Implemented Bucketing to find the nearest hotspots along a 5 mile radius based on the GPS data

SELF-DRIVING SIMULATION | Neural Network

- Developed a self-drving car model based on **convolutional neural network** with 27 million connections and 250 thousand parameters
- Used **Keras** on top of **TensorFlow** as the **machine learning** API
- Accelerated training the model with steering angle and car camera datasets using Cloud TPU

IMAGE SEGMENTATION | Unsupervised Learning

- Used **K-means** for replacing each pixel with its nearest cluster centroid color resulting in a 30% size compression
- Applied partial contrast stretching in order to improve the image quality
- Median filter was applied to the segmented image to remove any unwanted noise or region