Rong Chang

Master's Student in Computer Science At Northeastern University
Over 7-year and 20- project leading experience in the field of statistical models and machine learning
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Education

M.S student in Computer Science	Northeastern University	09/2019 – 12/2021
Ph.D in Psychometrics and Quantitative Psychology	Texas Tech University	08/2011 – 12/2016
B.A. in Education	Nanjing Audit University, China	09/2006 – 06/2010

Courses taken:

- Object-oriented Design
- Algorithm
- Computer System
- Foundations of Software Engineering
- Database Management Systems
- Computer Networking
- Web Development

Technical Knowledge

Language:	Java, Python3, JavaScript, R, SQL, Shell, C
Environment:	VSCode, PyCharm, IntelliJ IDEA, Clion, RStudio
Stack:	Git, React, Nodejs, Express, Springboot, MySQL, MongoDB, AWS, Angular, Django
Others:	Algorithm, Simulation, Data management, Statistical model and analysis

Work Experience

Research Professor	University of Houston	09/2018 – 05/2019
Postdoc Research Associate	Texas Tech University	02/2017 – 08/2018
Graduate Research Assistant	Texas Tech University	08/2011 – 12/2016

Technical Projects

Web Survey Support for Autism Children 08/2020 – 09/2020

Collaborative work project with hospitals

- The project developed web survey platform using **React** for parents to enter their observed answers of their autism kids, and collected longitudinal data tracking the kid growth every half of year.
- **RESTful API** was designed with **Springboot** for surveyed data on **AWS** integrated with **MySQL** (Amazon RDS).
- With the collected data, I built the **statistical models** as well as **machine learning techniques**. After each submission, the parents and doctors can be presented basic summary of a child development in past and training suggestions for next step.

A Database Management System for Grocery Shopping Pattern Prediction 05/2020 – 07/2020

Northeastern University, course project for Foundation of Software Engineering

- The project simulated shopping pattern data for grocery stores under the COVID-19 situation.
- I implemented **Machine learning** technique and constructed **ensemble tree models** predict the customer shopping pattern.
- I designed **UML** activity and database diagrams to capture the user requirements and use cases.
- We implemented **MERN** (**mongoDB**, **expressJS**, **react**, and **nodeJS**) stack that allows the users can insert new records and browser all records from database. The presentation of visiting data could be ordered and filtered by selected parameters.

A Stock Tracking Web System 04/2020 – 06/2020

Udemy, individual project from the Web Development Bootcamp

- A **node.js** basic web server with **RESTful** routes for stock information on certain goods such as wipes and alcohol. The stock database was collected through users' posts and comments.
- Considering the stock information need to be updated frequently, the database was built using **Mongo** that allows better efficiency and flexibility in information updates.
- Web platform was designed through **JavaScript** and **Bootstrap4**.

Program Evaluation System of Rearrest and Reincarceration 01/2014 – 01/2017

Texas Departments of Criminal Justice (TDCJ), Postdoc research associate

- Under contract, I lead a large-scale program evaluation on big data, in which, we used **machine learning** ensemble tree methods and **random forest** to build predictive models.
- As reported in our research papers, we achieved the predictive accuracy as high as 96%, superior to the normal range of predictive accuracy within 65% - 75% in most up-to-date risk assessment.