Yang Lu

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Education

Georgia Institute of Technology Jan 2021 – Dec 2022 (Expected)
M.S. in Computer Science, GPA: 4.0/4.0 *Atlanta, GA*

- Courses: Introduction to Algorithms, Software Architecture and Design, Software Development Process, Computer Networks, Database System Concepts & Design, Data and Visual Analytics

The University of Alabama Aug 2014 – May 2019
Ph.D. in Chemical Engineering, GPA: 4.0/4.0 *Tuscaloosa, AL*

South China University of Technology Aug 2010 – May 2014
B.S. in Materials Engineering, GPA: 3.4/4.0 *Guangzhou, China*

Technical Skills

Languages: Python, Java, SQL, JavaScript, HTML/CSS, UNIX shell, R
Frameworks: Spring Boot, Spring Security, Node.js, Django, Flask, Bootstrap, Redis
Developer Tools: Git, Docker, UML, Spark, AWS
Libraries: React.js, D3.js, Thymeleaf, pandas, Scikit-learn, NumPy, Matplotlib

Projects

Marijuana Analyzer | *JavaScript, Python, D3.js, Bootstrap, AWS, scikit-learn*

- Developed a web app showing insights of marijuana effects on mental health and future drug abuse
- Trained predictive machine learning models on high-dimensional healthcare data (56,314*2,691)
- Deployed models (accuracy > 85%) on AWS (S3, Lambda, SageMaker, API Gateway)
- Produced configurable, dynamic, interactive data visualizations using D3.js

Grocery Express System | *Java, Spring Boot, Spring Security, MySQL, Redis, Thymeleaf*

- Developed a grocery shopping system that provides support for online order placement and delivery
- Implemented a configurable GUI, persisted data in MySQL, built & tested RESTful API with Postman
- Implemented system access authentication & authorization, password encryption via Spring Security
- Integrated with Redis to cache database queries with 80% faster response time

Furniture Sales Reporting System | *Python, PostgreSQL, Flask, HTML/CSS*

- Built a sales reporting system with a dashboard UI to support enterprise decision making
- Designed and created EER and normalized schema with no redundancy for DBMS implementation
- Created indexes for efficient database operations for over 1 million sales records

Border Gateway Protocol (BGP) Hijacking Simulation | *Python, Mininet, UNIX shell*

- Generated network topology, prefixes/paths, router configurations using Python and Mininet
- Simulated different attack scenarios to demonstrate the effects of various prefix hijack attack instances

Experience

Research Scientist Jun 2020 – Present
Georgia Institute of Technology *Atlanta, GA*

- Built machine learning and signal processing models for wearable sensor development
- Designed and maintained a SQL database with customized utility tools to store group experimental data
- Analyzed data for feature engineering, automated workflow for data analysis & visualization