

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, JavaScript, C++, SQL, HTML/CSS, UNIX shell, R
Developer Tools: Git, Docker, UML, Spark, Amazon Web Services
Frameworks: Spring Boot, Spring Security, Node.js, Django, Flask, Bootstrap, Redis
Libraries: React.js, D3.js, pandas, Scikit-learn, NumPy, Matplotlib, Plotly, Thymeleaf

PROJECTS

Marijuana Analyzer (demo) | *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 (demo) | *Python, PostgreSQL, Flask, HTML/CSS, AWS*

- 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 motion detecting wearable sensor
- Designed and administered SQL database with customized utility tools to maintain experimental data
- Analyzed data for feature engineering, automated workflow for data analysis & visualization