

Yang Lu

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EDUCATION

Georgia Institute of Technology <i>M.S. in Computer Science, GPA: 4.0/4.0</i>	Jan 2021 – May 2023 (Expected) <i>Atlanta, GA</i>
<ul style="list-style-type: none">• Courses: Data Structures & Algorithms, Software Architecture and Design, Software Development Process, Computer Networks, Database System Concepts & Design, Data and Visual Analytics	
The University of Alabama <i>Ph.D. in Chemical Engineering, GPA: 4.0/4.0</i>	Aug 2014 – Aug 2019 <i>Tuscaloosa, AL</i>
South China University of Technology <i>B.S. in Materials Engineering, GPA: 3.4/4.0</i>	Aug 2010 – May 2014 <i>Guangzhou, China</i>

TECHNICAL SKILLS

Languages:	Python, Java, C++, JavaScript, 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** (repo) (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** (repo) | *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** (repo) (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 Mininet
 - Simulated different attack scenarios to demonstrate the effects of various prefix hijack attack instances

EXPERIENCE

Research Scientist <i>Georgia Institute of Technology</i>	Jun 2020 – Present <i>Atlanta, GA</i>
<ul style="list-style-type: none">• Built machine learning and signal processing models using for motion detecting wearable sensor• Designed and administered SQL database with customized utility tools to maintain experimental data• Analyzed data for feature engineering, developed automated data analysis & visualization programs	