Gwen GAO

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github.com/AlephCat-G | **Portfolio:** qidian-gao-portfolio.vercel.app

EDUCATION

Georgia Institute of Technology **August 2023 - December 2024**
Master's, Computer Science *GPA: 3.6*

- Master of Science in Computational Science and Engineering, ranked No.4 on csrankings.org
- Coursework: Data Structure, High Performance Computing, Algorithm, Machine Learning, Data Engineering

Soochow University **September 2019 - June 2023**
Bachelor's, Industrial Engineering *GPA: 3.88*

- Coursework: Operations Research, Inventory Theory, Linear Programming, Supplychain Management
- Recipient of 3 years of Scholarships for Spiritual Civilization, Entrepreneurship, and Excellence in Learning

SKILLS

Languages: Python, R, SQL, React, Typescript, C++, MATLAB, Java
DevTools: Git, CI/CD, MySQL, IntelliJ, VSCode, Webflow, Spyder, Tableau, Scikitlearn, Matplotlib

PROFESSIONAL EXPERIENCE

Amazon **Austin, Texas**
Device, Software Engineer Intern *August 2024 - November 2024*

- Engineered a content review and management system within Amazon's Global Content Store under the Device Customer Service org, implementing a review-ready page, comment highlighting, and issue tagging to streamline content validation and approval. Delivered 4 requests per sprint for 6 sprints, contributing to a more collaborative and efficient review workflow.
- Developed reusable components and automated integrated tests for Lambda activities, DTO, and AppSync services using React and TypeScript. Leveraged CI/CD pipelines, AWS CDK, CloudWatch, DynamoDB, and internal Amazon toolsets, ensuring high-quality and scalable deployments.
- Presented the final demo to an audience of 20+ including individual contributors, developers, and managers, receiving positive feedback on system design and functionality improvements.

Alibaba Group **Hangzhou, China**
Software Engineer Intern *September 2022 - November 2022*

- Revamped Alibaba's CRM system within the Sales division, migrating it from AngularJS to a modern React and TailwindCSS stack to enhance client tracking and communication workflows.
- Built modular CRM components for workflows like client segmentation and recommendations, with 50+ automated tests using Selenium and React Testing Library. Resolved 20+ critical issues and improved system reliability.

BOSCH **Suzhou, China**
Autonomus Solutions Intern *June 2022 - September 2022*

- Developed an executable for managing supplychain group inventory spreadsheets using Numpy and Openpyxl, reducing daily supplychain planning workload of 1 day to nearly 2 hours, facilitating automation of inventory tracking with BOSCH Suzhou source suppliers and distribution centers.
- Contributed to the optimization of automated driving by debugging the firmware flashing software for radars, sensors, and other automatic driving components using Java.

PROJECTS & OUTSIDE EXPERIENCE

Sustainable Water Bottling Plant Project **Atlanta, GA, USA**
Research Assistant *August 2023 - December 2023*

- Collaborated between the ISyE and the School of Architecture in contributing to a sustainable bottled water plant for Bahamas Environment, Science & Technology Commission, assumed responsibility for gathering millions of raw inbound & outbound, demand, network, inventory, and capacity data, utilized GT simulator in test-running and finally achieved 79.2% of market penetration, 75% of demand fulfilled at 99% service level and 42 days overhead
- Compiled and visualized results using Tableau and Matplotlib to 50+ Professors, BESTC officers and fellow researchers.

Application of Traveling Salesman Problem **Remote**
Student Researcher under Dr. Peng LIU, AP of National University of Singapore *November 2021 - April 2022*

- Based on TSP (Traveling salesman problem) algorithm, made the annealing-dynamic improvements to the basic model by optimizing courier routes between city hubs, docks, and hypernet in supplychain between 31 simulated cities.
- Involved in the literature review, data cleaning, and fine-tuning of the hyper-parameters in the Bayesian method used in reinforced learning of process engaged with the TSP algorithm.

COMAP's Mathematical Contest in Modeling **USA Nationwilde**
Meritorious Winner (9%) *April 2022*

- Developed a sophisticated LSTM neural network model to predict gold and Bitcoin prices using millions of 2005-2016 daily transactions data, and implemented a greedy dynamic programming model for high-frequency trading strategy, resulting in a simulated revenue of $5 billion.
- Optimized quant application strategies by introducing risk factors and performance metrics like the Sharpe Ratio, utilizing Scikit-learn and MATLAB for analysis and implementation.