**Yidan Gao**

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**TECHNICAL SKILLS**

* Languages: JavaScript/TypeScript, HTML/CSS, Java, Python, C, C++, Shell
* Frameworks: React, Redux, Node.js, Express, Spring Boot, Django, Flask, Pandas, TensorFlow, Flutter
* Databases and Tools: Git, AWS(EC2, S3, Lambda, DynamoDB), Docker, Kubernetes, GCP, PostgreSQL, MongoDB, Graph QL, Rest, Cassandra, RabbitMQ, Kafka, Elasticsearch

**EDUCATION**

**Northeastern University, Khoury College of Computer Sciences**  **Sept 2023 – Present**

*Master of Science in Computer Science*  *Boston, MA*

**Nanyang Technological University, Nanyang Business School July 2021 – Jan 2023**

*Master of Science in Business Analytics*  *Singapore*

**Fudan University, School of Management Sept 2017 – June 2021**

*Bachelor of Management in Financial Management*  *Shanghai, China*

**PROFESSIONAL EXPERIENCE**

**SkillUpIT.com**  **On, Canada**

*Full-stack Software Engineer Intern | Microservice, Cache Preheating, Lua, Asynchronous Processing May 2024 – Aug 2024*

* Contributed to the “Limited Time Discount & Buy Now” feature by integrating **Redis** and **RocketMQ** into a **MySQL** **master-slave architecture**, boosting throughput by 10x, from the thousands of QPS range.
* Refactored the order service into distinct discount and order microservices using **Domain-Driven Design (DDD)** principles. Developed unit tests with **JUnit** and **Mockito**, increasing test coverage from 60% to 85%.
* Implemented cache preheating for active promotions and designed lock/revert inventory services using **Redis** and **Lua scripts** to ensure efficient handling of high-demand scenarios.
* Handled peak-loading stress in the order service by asynchronously creating orders with **RocketMQ**. Developed a “Pay-Check & Cancel” mechanism using delay message consumption and optimized the **optimistic lock** for inventory updates in the MySQL database.

**Pactera Technology International Ltd. Shanghai, China**

*Full-stack Software Engineer Intern |* *Figma, React, PostgreSQL, Rest API, full-stack, Node, Express May 2023 – Aug 2023*

* Built a full-stack web application for same-city urgent package delivery, enabling clients to request local deliveries and drivers to accept and fulfill these requests.
* Designed and implemented an intuitive user interface using **Figma** and **React** for scheduling and managing deliveries. Utilized various **React** **hooks** to enhance front-end responsiveness and efficiency.
* Implemented secure user authentication using **JSON Web Token (JWT)** to protect user data and ensure safe access.
* Integrated a **PostgreSQL** database with the **PostGIS** extension to store and query geographical data, optimizing database queries by over 30% with spatial indexes on geographical locations.
* Created a **RESTful API** backend using **Node.js** and **Express**, managing user-driver interactions, package requests, status updates, and fulfillment notifications via **Twilio SMS**.

**China Merchants Securities Co., Ltd. Shenzhen, China**

*Data Analyst Intern | Python, Machine Learning, Pandas, NumPy, Django, Crawler, TensorFlow, SciPy Oct 2022 – Jan 2023*

* Developed a web scraping tool in Django for internal users to extract requested files such as client lawsuits, company fundamental data, and legal justification documents. Engineer a python-based web crawler to parse and summary file data, significantly reducing analysis time by > 50%
* Developed probabilistic models and expert templates using TensorFlow and NumPy for accurate table location and semantic analysis of financial data.
* Implemented outlier monitoring and multi-dimensional linkage analysis with Pandas and SciPy for automatic risk prompting.

**PROJECTS**

*Personal Blog Website | MERM stack, React Router Dom, Redux Toolkit, Tailwind CSS, AWS, EC2, S3, MongoDB, OAuth*

* Developed a full-stack **MERN** blog application with complex features including user dashboard, Google **OAuth**, keyword-based blog search, and image upload.
* Implemented an industry-standard frontend with **React** **Router Dom** for dynamic routing, **Redux** **Toolkit** for state management, and a user-friendly interface using **Tailwind** CSS.
* Deployed the application on **AWS**, utilizing **EC2** for hosting the backend and **S3** for storing static assets like images and profile photos to ensure scalability and durability of the system.
* Utilized **MongoDB** for storing post and user data, leveraging features like flexible schema design, fine-tuned database queries and optimized storage structures to improve query efficiency based on API requirements.