(Barclay) Sizhe Fu

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EDUCATION

University of Pittsburgh   Sep 2022 - May 2024
Master of Information Science   GPA: **3.88**/4.0
Coursework: Algorithm Design | Data Structures | Database Management | Applications of Networks

Zhengzhou University, China   Sep 2017 - Jul 2021
Bachelor of Economics, Economic Statistics   GPA: **3.28**/4.0
Coursework: Data Mining | Applied Stochastic Process | Bayesian Statistics | Time Series Analysis
Academic Honor: Excellent Student Scholarship (Top 30%) | NECCS (National Second Prize) | Outstanding Undergraduate International Exchange Scholarship

SKILLS

- **Programming Languages:** Java | JavaScript | TypeScript | Python | Golang | HTML5 | CSS3
- **Framework:** Express.js | React.js | Node.js | Spring | MyBatis |Vue | Mongoose | Stripe.js | Gin | Bootstrap
- **Data Management:** MySQL | MongoDB | PostgreSQL | Redis | Neo4j | Cassandra | MapReduce | Hadoop
- **Tools:** Git | Maven | Docker | Kubernetes | AWS | Npm | Postman | Jest | Markdown| IntelliJ | VS Code
- **Data Analytics & Visualization:** R (tidyverse) | Python (pandas, NumPy, matplotlib) | MATLAB | SPSS | SAS

PROFESSIONAL EXPERIENCE

Online Ticketing App   Pittsburgh, PA
Software Development Engineer   Jun 2023 – Oct 2023
- Identified a need for streamlined deployment within a large-scale project; tasked with creating a comprehensive ticketing application that encompassed six pivotal modules (Order, Ticket, Payment, etc.); Established an implementation pipeline with Docker and Kubernetes (K8s), boosting deployment efficiency by **60%**.
- Constructed the backend infrastructure using **Node.js;** Utilized **Redis** for concurrent message processing.
- Ensured automated and streamlined deployment processes using **Skaffold** for updates, increasing development efficiency by **80%**; Integrated **Stripe API (Payment Intents & Webhooks)** for payment processing.
- Devised and implemented the UI using **React** alongside **Next.js**; Defined data structures and implemented data storage and retrieval using **Mongoose**, ensuring data consistency and efficiency.
- Conducted comprehensive testing using **Jest** for unit testing and **Postman** for API testing, ensuring **100% availability** of all modules. Integrated **CI/CD** pipelines to automate testing procedures; Used **Npm to** Effectively manage project dependencies.

E-Commence Website MERN   Pittsburgh, PA
Software Development Engineer   Jan 2023 – May 2023
- Devised, established, and deployed a shopping website. Assembled the user login page, user transaction history page, and seller management page, and maintained the server side for operation and optimization.
- Developed backend by **Node.js**, handling **50,000+ concurrent user sessions;** Leveraged **JSON Web Tokens** (JWT) to ensure secure authentication and data protection for authorized users. Crafted and built the front end using **React.js;** Using **HTML5** and **CSS3** for structuring web pages and styling for better user engagement, increasing visits by **10%.**
- Designed the database schema and data structures to efficiently represent various data entities, such as products, user accounts, transactions, and order history; Improved generalization and data storage efficiency with non-relational database (**MongoDB**).

JAVA Backend Database API   Pittsburgh, PA
Software Development Engineer   Jan 2023 – May 2023
- Optimized data structure to facilitate data reporting and building **RESTful APIs** with **Java** and **Spring MVC**; Adopted Spring ecosystem, including **Spring Boot** to streamline development, deployment, and autoconfiguration.
- Developed **CRUD** (Create, Read, Update, Delete) functionality to manipulate student information.
- Utilized **MyBatis** to connect to a MySQL database for data persistence. Executed **connection pooling** with **Apache Tomcat** to efficiently manage database connections, resulting in a **20%** lift in resource utilization.

Volkswagen Automatic Transmission (Tianjin) Co. Ltd.   Tianjin, China
Overhead (SGK) & Investment Controlling Intern   Feb 2021 – May 2021
- Tasked with the optimization of data processing modules bogged down by manual inefficiencies.
- Optimized data processing modules (Excel, Macro, ACCESS) and financial models with automated pipeline, reduced **66%** manual work on the monthly financial budget.