

# (Barclay) Sizhe Fu

Cell: (+1) 412-606-9567 | Email: sif33@pitt.edu | <https://github.com/BarclayFu> | [linkedin.com/in/sizhe-fu](https://www.linkedin.com/in/sizhe-fu)

## 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 | MongoDB | 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 **TypeScript** project; Created 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-Commerce 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.