

XUAN JIANG

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Education

University of California, Berkeley

June 2021 – December 2023(Exp.)

PhD in Transportation Engineering (Minor in Computer Science) GPA:4.0 / 4.0

Berkeley, CA

Courses: Applications of Parallel Computers, Introduction to ML, Back-End Web Architecture, Software Dev

University of California, Berkeley

July 2020 – May 2021

Master of Science in Transportation Engineering GPA:4.0 / 4.0

Berkeley, CA

Courses: Data Structures and Algorithms, Introduction to Database Systems, Introduction to AI, Operating Sys

Tongji University

Sep. 2016 – May 2020


Bachelor of Science in Traffic Engineering | Object-Oriented Design, Compilers, Internet Protocols

Shanghai, China

Experience

Lawrence Berkeley National Laboratory

June 2021 – Dec. 2022(Exp.)

GSRA  [LBNL-UCB-STI/beam/Xuan/ActivitySim-micromobility](https://github.com/Xuan-1998/ActivitySim-micromobility)

Berkeley, CA

- Deploy agent based traffic simulation on AWS EC2 instances to enhance cloud computation and multi-task implement but also on NERSC(National Energy Research Scientific Computing Center) to utilize the Cray EX system with AMD CPUs and NVIDIA A100 GPUs Berkeley Lab owns
- Inherit the Akka FSM trait which provides a domain-specific language for programming agent actions as a finite state machine to achieve the goal of doing **traffic simulation based on 2,466,019** households travel plans from bay area

China Ocean Shipping Company

July 2020 – Oct. 2020

Software Engineer Intern

Shanghai, China

- Built an enterprise-level Database that integrated **100,000+ shipping information** on top of Hadoop and Hive.
- Implemented the backend Restful API to provide up-to-date access to Google Earth and Kylin data.
- This API provided an intelligence utility that equipped **2000+ analysts** in the company.

Eastrong International Logistics Co., Ltd

Jan. 2018 – May. 2018

Software Engineer Intern

Shanghai, China

- Conducted an inventory forecast by building a linear regression model in Python based on historical data, which increases the **accuracy** by **17%** and further analyze the causality relationships between different factors.
- Validated the prediction on dataset, and developed a dynamic visualization dashboard with JavaScript and Tableau.

Projects

Shenzhen Metro Website | *Java, Docker, JavaScript, React, Spring Cloud, JWT, Mybatis Plus, Redis, AWS*

 [GitHub](#)

- Split-Stack-Developed an online metro application that includes a user system and a management system.
- Implemented authority management, subway management, statistical analysis, and line classification management.
- Used Spring Boot for the back-end, React+Hooks For the front-end, and Amazon S3 to store files.
- Deployed the web application to real users with AWS Elastic Beanstalk.

Shanghai Airport App | *Java, Spring Boot, Shiro, Redis, Mybatis, Docker, Swagger*

 [GitHub](#)

- Established the passenger management and travel management modules' back-end of a commercial mobile app.
- Deployed and achieved distributed architecture, load balancing and hot backup via Haproxy & XtraBackup.
- Optimized around **300** SQL query through Slow Query Log, and reduced **80%** query time through ElasticSearch.

Interpreter for a new Script Language | *Java, C, Git, GluonJ*

 [GitHub](#)

- Designed a new high-level dynamically typed, multi-paradigm, interpreted programming language.
- Implemented the interpreter with java which features garbage collection, lexical scope, closures, classes, and inheritance.
- Optimized the traversal of Abstract Syntax Tree and improved the performance by redesigning the Virtual Machine.

Technical Skills

Languages: Java, Go, Python, C/C++, HTML/CSS, JavaScript, SQL

Frameworks/DataBases: gRPC, Spring Boot, Node.js, MyBatis, MySQL, MongoDB, Redis, Amazon S3

Developer Tools: Gradle, Maven, Git, Docker, Nginx, Tomcat, Amazon EC2, Elastic Beanstalk, Amazon EC2