# Haorui Li
### Software Engineer Intern

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## EDUCATION

**Carnegie Mellon University**                                                                 Aug 2023 — Dec 2024
*Master of Science in Software Engineering*
Cumulative GPA **3.89**/4.0
*Courses: Software Engineering, Software Verification & Testing, Cloud Computing, Foundations of Database Design, Software Design and Architecture*

**New York University**                                                                        Aug 2019 — Jan 2023
*Bachelor of Science in Computer Science, Data Science (AI concentration)*
Cumulative GPA **3.91**/4.0, Major GPA **3.98**/4.0. Completed the 4-year program in **3.5 years**.
*Courses: Data Structures, Algorithms, Operating Systems, Software Engineering, Machine Learning, Deep Learning, Reinforcement Learning*

## SKILLS

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| **Programming Languages** | **Python, JavaScript, TypeScript, SQL, HTML, CSS**, Java, Golang, C, Bash, PHP |
| **Project Engineering** | **React, Next.js, Express.js, d3, Scss, Django, Git**, Spring Boot, Rollup, Webpack, Vue, Jenkins |
| **Cloud Infra, ML and Big Data** | **AWS (EC2, S3, CloudWatch), Docker**, Azure, GCP, Kubernetes, Nginx, Apache Spark, PyTorch |

## WORK EXPERIENCE

**Software Engineer Intern**                                                                    May 2022 — Jul 2023
*Orka Labs*                                                                                     *Palo Alto, CA*
- Led development of responsive **React** user interface library (**Rollup**), wrote corresponding API docs and use cases with CI/CD (**AWS EC2**, **GitHub actions**), web development efficiency increased by around **30%**, code redundancy decreased by **26%**
- Constructed and maintained **10+** pages including products intro, checkout, sign in, and customer support (**React, Next.js**)
- Established client-side monitoring system (**Django, React Lifecycle**), exception detection rate increased about **300%**
- Investigated on upgrade for **Next.js 13** and **React 18**, optimizing dev and UX, end-to-end deployment rate increased by **11%**
- Set up AB test toolchain (**AWS**, **Next.js** middleware, **JavaScript**), establishing project-wide feature release and metrics collection
- Designed auto git log tracker to connect OA system feature/issue management (**Golang**), increase overall team efficiency over **6%**

**Machine Learning Intern**                                                                     Jun 2021 — Aug 2021
*Microsoft*                                                                                     *Shanghai, China*
- Established **Python** project for data preprocessing and feature engineering on **Azure** with **pandas** and **numpy**
- Predicted energy consumption results with multiple ML models including **LR, SVR, GBFT, RF**, for car workshops of Shanghai Volkswagen Automotive Co., Ltd. Best performance of model reached **78%**
- Assisted operation group to deploy trained model on **Power BI**, as one part of data visualization tool
- Conducted meetings with client, reported to client with work progress, and introduced principle of models

## RESEARCH AND PROJECTS

**Software Engineer, Research Assistant Intern**                                                Jul 2023 — Nov 2023
*New York University Shanghai*                                                                  *Shanghai, China (Remote)*
- Constructed **10+** pages with **React** including login, task list, writing assignments, FAQ, message, and consulting training
- Created backend with **Django** and **SQLite**, established **crontab** jobs for scheduled SMS tasks with **Alibaba Cloud**, synced data with **Qualtrics** Web API, personalize admin site with **Django admin** to manage admin users and groups access
- Utilized **AWS CloudWatch** for event tracking, deployed with **Nginx** on **AWS EC2** instance, setup CI/CD with **GitHub workflow**
- Collaborated with NYU Shanghai Diversity Lab to design and built an LGBTQ+ mental health consulting training web application

**Software Testing Oracle Generation and Machine Learning Approach Evaluation**                 Jan 2022 — May 2022
*Deans' Undergraduate Research Fund (DURF), New York University Shanghai*
- Proposed detailed **ML model evaluation pipeline**, supporting reproducing research paper in automatic test oracle generation
- Optimized **2 active learning** strategies, decreased **80%** of test cases needed for model training with equal accuracy
- Utilized proposed pipeline with **Randoop** and **JaCoCo**, evaluated and analyzed several static learning, active learning, and deep learning methods as well as feature extraction techniques with **Defects4J** database

**Flytrip — Flight and Ticket Management System**                                               Apr 2021 — May 2021
- Designed and built **React** web app for airline query, booking, and management with **Bootstrap** and scss
- Set up frontend with **Webpack**, antd and HighCharts, setup communication with **Socket.io**, ensuring dynamic update of data
- Set up **Flask** backend with **MySQL**, defined and implemented secure **Restful APIs** with **Swagger** documentation

## HONORS AND LEADERSHIP

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| New York University Magna cum Laude, Shanghai Excellence Award | May 2023 |
| New York University Dean's List for Academic Year | 2019—2020, 2020—2021, 2021—2022 |
| New York University Shanghai Recognition Award | 2020—2021, 2021—2022 |
| President, Splice Computer Science Club, New York University Shanghai | 2020—2021 |
| Learning Assistant (React), CSCI-SHU 235 Information Visualization | Aug 2021—Dec 2021 |