

Shimao Du

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EDUCATION

Carnegie Mellon University, Pittsburgh <i>Master of Science in Information Technology - Mobility</i>	<i>May 2024 – Jun 2026</i>
Beijing Jiaotong University <i>Bachelor of Science in Software Engineering</i>	<i>Sept 2020 – Jun 2024</i> <i>GPA: 3.68/4.0</i>

SKILLS

Programming Languages: Python, Java, C++, C, SQL, TypeScript, Linux Shell, Kotlin, Excel, MATLAB, Go.
Framework Sets: Spring Boot (Gradle & Maven), React, Django, Flask, Tkinter, Qt5
Skill Sets: RESTful API Design, Spring Framework, CI/CD, Docker, Kubernetes, Git, Linux, Kafka, Redis, MySQL, MongoDB, Hadoop, Junit5, GDB, Valgrind

WORK EXPERIENCE

Beijing Jiaotong University Research Internship <i>Full Stack Engineer</i>	<i>Beijing China</i> <i>Sept 2023 – Jun 2024</i>
<ul style="list-style-type: none">Designed and realized Road Object Labeling Tool based on Spring Boot and React framework.Engineered a frontend encompassing 8 pages, utilizing Redux for state management and Postman for API testing.Created 4 backend modules with a total of 33 RESTful API functionalities, integrated JWT authentication in the Spring Security framework, and Redis for caching user login tokens and recent page visit information.Launched project server and deep learning model based on cross-cloud platform deployment system Kubernetes.	
Motovis Intelligent Technologies Co., Ltd. <i>Algorithm Testing Engineer</i>	<i>Shanghai, China</i> <i>Sept 2023 – Dec 2023</i>
<ul style="list-style-type: none">Configured 2 models using TorchServe and Docker, tested semantic segmentation model results via Postman.Led the development of a testing toolchain using Qt5, implementing real-time model inference evaluation through ONNX Runtime, and automated testing by sending HTTP requests to TorchServe.Collaborated with toolchain R&D team to resolve 2 Qt5 GUI-related memory leaks identified by Valgrind.Managed deployment of the testing toolchain using GitLab CI/CD and Docker, tracking progress with JIRA.	
GBCOM Communication Technology Co., Ltd <i>Python Developer</i>	<i>Shanghai, China</i> <i>Aug 2022 – Aug 2023</i>
<ul style="list-style-type: none">Led development of a Tkinter-based solution to automate bulk emails, delivering a prototype in 2 weeks.Initiated office workflow automation with Flask and React, leading a team of 3 to deliver v1.0 in a month.Collaborated on implementing JWT authentication with Flask-Security in v2.0, containerized the project for deployment on internal servers using GitLab and Docker.Managed project operations with 3-week updates via Lark, optimized Flask multithreading, improved UI, and resolved 17 bugs, including Outlook draft duplication and Flask crashes.	

PROJECT EXPERIENCE

Tech-Infused Badminton Venue System Django Backend Developer	<i>Jun 2023 – Aug 2023</i>
<ul style="list-style-type: none">Led design and development of a stadium venue system using Pytorch-based TrackNet for shuttlecock tracking, integrated Kafka for real time video transmission, enhanced with Hadoop for accelerating model analysis.Conceptually proposed and implemented contactless user registration feature utilizing NFC on Django backend.Integrated 6 cameras in total with DeepSort algorithms, coupled with smartwatch for performance analysis, and utilized MongoDB for efficient storage and retrieval of video and sensor data.Led shuttlecock trajectory data collection with 4 recording devices and supervised data processing and annotation.	
Movie Information Management System Backend Engineer	<i>Mar 2023 – May 2023</i>
<ul style="list-style-type: none">Managed user sessions using Spring Security and Redis, ensuring page navigation through JWT whitelisting.Incorporate MongoDB for source data management and flexible querying, Spark for data preprocessing.Introduced Spring Cloud Micro-services in v2, utilizing DSSM on Ali Cloud Services for model inference.Accelerated deployment and testing by collaborating on the creation of Dockerfile for GitLab CI, automated API document generation with Swagger and implemented over 60 Junit5 test cases for automated testing.	