

# DENGYANG ZHOU

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## SUMMARY

Master's student in Software Systems Engineering (GPA 1.6) at RWTH Aachen with hands-on experience in microservice-based application development, LLM deployment on HPC infrastructure, and CI/CD automation. Skilled in Python, Java, C and connecting local-remote LLM environments via gateway design. Passionate about software development, scalable intelligent systems, cloud platforms, and LLM engineering.

## TECHNICAL SKILLS

- **Languages:** Python, Java, JavaScript/TypeScript, C/C++, SQL
- **Frameworks & Tools:** Node.js, Next.js, Electron, Git, GitLab CI/CD, Docker, MCP
- **LLM & Distributed Computing:** Ollama, HPC environment, ngrok tunneling, Remote-Local LLM routing
- **Databases:** relational database, noSQL
- **Other:** project management, Agile development, unit testing, data processing

## PROJECT EXPERIENCE

### Virtual Personal Assistant — RWTH Aachen Lab

- Tech: Python, Node.js, Electron, Next.js, GitLab CI/CD, Docker, MCP, Ollama, HPC
- Deployed LLM models to RWTH HPC using Ollama with secure remote access through ngrok tunneling.
- Built full communication workflow: Electron → API Gateway → MCP servers → HPC-hosted LLMs.
- Designed and maintained GitLab CI/CD pipeline, improved reliability of releases.
- Implemented MCP server modules for RWTH services, supporting live mensa menu + gym usage inquiries.

**Github:** <https://github.com/dengyang-zhou/VirtualPersonalAssistant>

### Airport Management System — QMUL Lab

- Developed airport resource scheduling and booking service following Agile/Scrum.
- Created minimal UI and maintained sprint planning + retrospectives + docs.

**Github:** <https://github.com/dengyang-zhou/SoftwareEngineer-Airline>

### DNS Relay System — QMUL Lab

- Implemented local DNS relay with cached domain-IP mapping to reduce query latency.
- Handled multiple concurrent requests with multithreaded socket programming in C.

**GitHub:** [https://github.com/dengyang-zhou/DNS\\_relay\\_project](https://github.com/dengyang-zhou/DNS_relay_project)

## EDUCATION

### RWTH Aachen University

#### Master of Science, Software Systems Engineering

Oct 2023 – Present

Grade: 1.6 (German grade)

### Queen Mary University of London

#### Bachelor of Science, Internet of Things

Sep. 2019 – Jun. 2023

Grade: First Class

### Beijing University of Posts and Telecommunications

#### (Bachelor of Science, Internet of Things

(joint Program)

Sep. 2019 – Jun. 2023

## ADDITIONAL INFORMATION

- **Languages:** English (C1)
- **Certifications:** Huawei Cloud Student Developers – Campus Administrator
- **Awards/Activities:** BUPT Scholarship (2019–2020), BUPT Scholarship (2021–2022)