Yu Nie

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Education

Brown University | **Aug. 2023 – May 2025**
MS. in Computer Science | *Providence, RI*
GPA 4.0/4.0.

Purdue University | **Aug. 2019 – May 2022**
BS. in Computer Science and Mathematical Statistics | *West Lafayette, IN*
GPA 3.80/4.0. Dean's List & Semester Honors for 6 semesters

Experience

Brown Library Web Services | **June 2024 – Present**
Web Technologies Assistant | *Providence, RI*
- Optimized the library's book search functionality, reducing query response time by 30% through SQL query optimization and PHP code refactoring.
- Integrated third-party APIs for ISBN lookup and library internal management, facilitating seamless data exchange and improving user experience.
- Conducted comprehensive testing of the library system using automated and manual testing methods, achieving a 95% defect-free deployment rate.

Brown University | **Aug 2024 – Dec 2024**
Teaching Assistant | *Providence, RI*
- Conducted weekly office hours and responded on digital learning platforms to assist students with assignments.
- Graded midterm and final exams and participated in regular meetings with professor and fellow teaching assistants.

SpeakIn Technologies Co.,Ltd | **May 2021 – July 2021**
Software Engineer Intern | *Shanghai, China*
- Performed trans-coding, content-extracting and deduplication with 2TB audio data in batches.
- Improved 40% deduplication processing speed by implementing multiprocessing and matrix.
- Developed Restful APIs for audio file import, query, playback, annotation, etc using Django.
- Reduced SQL average execution time by 35% by adding indexes and optimizing SQL queries.

Purdue University Research Center | **Apr 2021 – Oct 2021**
Research Assistant in Continuous Analysis of Many CAMeras (CAM2) | *West Lafayette, IN*
- Developed a C programming analysis software with CMake and Valgrind to grade programming homework.
- Assisted in designing Makefile for test cases, JSON file generator for grading rubric, and grading interface.

Projects

Open book Search Engine | *Javascript, Node.js*
- Developed an open Book Search engine on a self-implemented distributed system and Map-Reduce program.
- Established core services including status management, routing, communication, group handling, and storage.
- Crawled and indexed over 10000 books and generated inverted indices using Map-Reduce and TF–IDF metric.
- Designed a query system and a web page that can search based on author and book title, and do spellcheck.

Online Movie Shop | *C#, ASP.NET, Angular, Azure*
- Developed an online shopping System using ASP.NET that supports authentication and pagination deployed on Azure.
- Adapted Entity Framework Core Code First Approach for object-relational mapping, and LINQ to access data.
- Utilized front-end technologies such as Angular, Bootstrap, and HTML/CSS to render the application.
- Implemented and configured JWT authentication, cross-origin resources sharing, logging with Middleware in C#.

Technical Skills

Languages: Python, Java, C, Go, C#, JavaScript, SQL
Frameworks & Databases: Linux, Django, MySQL, Angular, Restful API
Developer Tools: Git, Linux, AWS EC2, Docker, Postman