FEI QIN(FAYE)

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EDUCATION

Trinity College Dublin September 2022 - June 2023
MSc. High Performance Computing (2:1) *Dublin, Ireland*

Hohai University September 2018 - June 2022
BSc. Environment Science (81.44/100) *Nanjing, China*

SKILLS

Languages	Java, CSS, HTML, JavaScript, C
Developer Tools	VS Code, MS Visual Studio, Spring Tool Suite, Eclipse, MobaXterm
Open Source Frameworks	Spring Boot, Spring Framework, React
Others	Git, MySQL, MongoDB, Tableau, Linux, MPI, OpenMP

PROJECTS

Movie March 2024

Implemented a full-stack movie application including user login/registration, movie searching, viewing details, posting reviews, and streaming trailers
- Front end designed with **React.js** and **React Router** for an intuitive UI
- Integrated **React Player** for streaming movie trailers and implemented advanced filtering options for a personalized search experience.
- Implemented a decoupled architecture with **Axios** for efficient data exchange, enhancing the user experience
- Backend used **Spring Boot** and **MongoDB** implemented **REST API**
- Integrated **TMDB API** for fetching movie data
- Implemented **JWT** with **Spring Security** for secure user authentication and authorization
- Development environment: **Spring Tool Suite 4**, **Maven 3**, **Visual Studio Code**

Book Management System January 2024

Implemented a full-stack book management system web application providing APIs for CRUD operations on books
- Technology Stack: React, Spring Boot, Spring Data JPA, Axios, H2 Database
- Built up a responsive-design frontend with React.js, enhancing user interaction and usability
- Utilized Axios for seamless API communication, and H2 Database for lightweight data storage
- Developed a RESTful backend in Spring Boot, facilitating efficient data processing and application logic
- Covered over 90% of backend code through **unit testing** with JUnit and Mockito
- Development environment: **Spring Tool Suite 4**, **Maven 3.9.6**, **Visual Studio Code**

Optimized NMF Implementation July 2023

Implemented a hybrid Non-Negative Matrix Factorization algorithm for dimensionality reduction and clustring of high-dimensional data
- Utilized a hybrid **MPI+OpenMP** approach to accelerate the NMF algorithm, strategically distributing computational tasks across multiple processing units.
- Extended the application of the optimized NMF to image processing, achieving notable improvements in processing efficiency and outcomes
- Programmed in **C**, developed on a **Linux** physical server, accessed via **SSH** using **Mobaxterm**