Liya Wang

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EDUCATION

MSc Interactive Media 2023 – 2024

University College Cork, School of Computer Science, Ireland *First Class Honours (1:1)*

- Relevant Modules: Internet-based Applications, Mobile Applications, Human-computer Interaction.
- Participated in Microsoft/UCC "Sustainable Cities Challenge," applying data analysis to optimize solutions.
- SEFS Merit-Based Scholarship, 2023.

PROFESSIONAL EXPERIENCE

Lab Demonstrator September 2024 – Present

University College Cork *Cork, Ireland*

- Provided **technical support** and debugging assistance to students in **Computer Science labs**, ensuring smooth operation in a **Linux environment**.
- Guided students in troubleshooting **JavaScript, PHP, Bash commands**, and other programming challenges, fostering analytical **problem-solving skills**.

Software Developer (Volunteer) June 2024 – September 2024

Ballyhoura Development CLG *Remote, Ireland*

- Developed an **iOS application** for **cultural preservation**, integrating **Swift, ARKit**, and **Mapbox** for a **GPS-triggered audio tour**.
- Implemented **Firebase** for **real-time data synchronization** and **secure user authentication**.
- Conducted **unit, integration, UI, and performance testing** across Apple devices to ensure seamless functionality.
- Worked closely with stakeholders from Ballyhoura CLG to align the project with community goals

KEY PROJECTS & EXPERIENCE

Full-Stack Picture Sharing and Editing App 2025

- Developed a full-stack web application inspired by Pinterest, utilizing **React** for the frontend, **Node.js** for the backend, and **MongoDB** for the database.
- Implemented **JWT authentication** with cookies to manage user sessions securely.
- Designed and developed **RESTful APIs** to handle user interactions and data management.
- Integrated **image upload and editing** functionalities to enhance user experience.
- Managed state effectively using **React hooks** and the **Context API**.

Diamond Search Algorithm Implementation 2024

- Implemented the **Diamond Search Algorithm** for block matching in motion estimation using **Python**, **NumPy**, and **Pandas**.
- Prepared a structured report comparing **Diamond Search (DS)** and **Exhaustive Search (ES)** results, using **PSNR** as a performance metric.
- Processed and visualized reference and target images to compare search methods, leveraging **Matplotlib** for graphical representation.

SKILLS

Technical: Swift, Python, JavaScript, React.js, three.js, PHP,SQL, HTML5, CSS, Apple Development APIs
Soft Skills: Analytical thinking, problem-solving, teamwork, effective communication

CERTIFICATIONS & TRAINING

JavaScript Algorithms and Data Structures – freeCodeCamp (2024)

Internet Governance & International Law – Lodz Cyber Hub (2024)