**Cliff Feng**

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**Summary**

Results-oriented and innovative Web Developer with extensive experience specializing in both front-end and back-end web application development. Proficient in JavaScript (React, Node.js), HTML5, CSS3, and backend frameworks such as Java Spring Boot and Python Flask. Highly skilled in RESTful API integration and development, and cloud technologies including AWS.

Developed scalable web applications, including a Gradescope automation tool and an iOS festival promotional app. Experienced in delivering projects that improve user experience and streamline functionality in fast-paced environments.

**Skills**

Languages: Java, JavaScript, C++, Python

Web tech: Spring Boot

Front end: HTML5, CSS3, jQuery, React

DB: SQL, MySQL, DynamoDB

Tools: AWS, Netlify, Git, Unity, Figma

**Work Experience**

**Block Model Compression Algorithm**

*07.2023 - 12.2023*

*Adelaide, SA*

Description: Development of a block model compression algorithm to optimize 3D shape processing and reduce storage requirements.

Technologies: Python, CSV File Operations, Mean Shift Clustering Algorithm  
1.Implemented a clustering algorithm using the Mean Shift technique to identify and extract blocks with the highest purity from 3D models, enabling more granular and precise data representation.

2.Processed and analyzed CSV file input and output operations using Python's pandas library, enabling efficient data cleaning, transformation, and storage for 3D shape model compression workflows.

3.Developed a recursive algorithm using Python to minimize the number of output blocks by identifying the most frequent color blocks along the depth axis in 4x4x4 models, leveraging NumPy for efficient computation, which reduced storage complexity and enhanced model efficiency, particularly in cases where block purity was less than 1.

4.As a team leader to manage the code development team, ensuring alignment with project goals and effective collaboration with the Scrum Master, fostering clear communication and effective teamwork.

**Implementation of Remote Desktop Window Control System Based on Unity Platform**

*09.2021 - 06.2022*

*Adelaide, SA*

Description: Developed a remote desktop window control system to enable interactive management of desktop components through Unity.

Technologies: Unity, C#, Java, VNC, Mouse Ray Casting

1.Developed the remote control system using Unity and C#, integrating with VNC software to implement remote desktop control by allowing users to input the target computer's IP address and password.

2.Configured Unity's RectTransform and Canvas systems to capture the coordinates of desktop window components and using Unity's UI framework to implement a screenshot-like functionality for capturing and displaying window content.

3.Implemented interactive button functionalities on the desktop using mouse ray casting techniques, enabling precise user interactions.

4.Implemented backend communication with the VNC server using Java and Socket programming, ensuring secure and reliable data transmission by leveraging TCP/IP protocols for connection stability and error handling.

**Adelaide Festival Promotional Application**

*07.2020 - 02.2021*

*Adelaide, SA*

Description:Developed an iOS application to promote Adelaide festivals by providing users with event information and interactive features.

Technologies: Swift, Xcode, Adelaide Festival API

1.Developed an iOS application using Swift on the Xcode platform, enabling seamless event promotion and user interaction.

2.Integrated with the Adelaide Festival API to fetch and display real-time event data, including names, venues, and geographical coordinates (latitude/longitude), enhancing the comprehensiveness of event information.

3.Implemented a rating feature using API endpoints that allowed users to provide "Likes/Dislikes" for events, with real-time updates to the ratings displayed in the app.

4.Created a "Register Interest" feature using local data storage, providing a foundation for more advanced data submission functionalities in future versions.

**Gradescope Multitool Development**

*03.2024 - 07.2024*

*Adelaide, SA*

Description: Developed a multifunctional web application to enhance the Gradescope platform, focusing on automating grading, managing student submissions, and improving overall user experience for educators.

Technologies: React, Node.js, Express, Cheerio, Axios, YAML, CSV

1.Implemented the frontend using React, creating modular components for course and assignment management, grade visualization, and file uploads, ensuring a responsive and user-friendly interface.

2.Built the backend using Node.js, Express, and Cheerio to parse HTML pages and extract course, assignment, and grade details from Gradescope for seamless data management.

3.Automated student grade selection by implementing an algorithm using JavaScript to filter and identify the best submissions.

4.Integrated CSV and YAML file processing using Node.js and libraries.

5.Implemented a file upload system using React on the frontend and Node.js on the backend, allowing instructors to parse and view grading configurations for improved assignment management.

6.Established secure user authentication using Node.js, Express, and SAML standards, supporting both standard and school login methods to ensure data privacy and access control.

7.Conducted comprehensive testing using Jest for frontend components and Mocha for backend logic to handle edge cases like empty submissions or file parsing errors, ensuring system reliability and performance.

**Certificates**

AWS Cloud Practitioner (Foundational) 2023.12.20

**Education**

2022.09 – 2024.07 **University of Adelaide**

Major: Computing and Innovation

2020.09 – 2022.07 **University of South Australia**

Major: Software Engineering

(2018.09 - 2020.07) **Xi'an University of Architecture and Technology**

Major: Computer Science