

# Qiaoyu (Vincent) GU

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## EDUCATION:

### The University of Iowa

Iowa City, IA | 08/2019 - 05/2023

- **Bachelor of Computer Science** - Major GPA: 3.62/4.00 ([Transcript Link](#))
- **Coursework:** Object-Oriented Programming, Discrete Mathematics, Algorithms, Data structures, Software development, Functional Programming, Network Applications, Computer organization and architecture
- **Dean's Honor List:** 2020 Spring, 2021 Spring, 2022 Spring

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## WORK EXPERIENCE:

### IRRC eLearning

Iowa City, IA | 05/2022 – Present

#### Software Engineer, Intern

- Developed 5 eLearning applications through Agile process and led to a **\$40,000** contract with Moodle.
- Created full-stack eLearning web applications using **Vue** and **PHP** for clients from over 20 educational institutions
- Built hundreds of front-end pages support persisting muti props and states across pages using **React** and **Redux**
- Built a React component library for 3 different user interfaces and made **80%** of the front-end pages reusable
- Developed web worker to realize JavaScript **multi-threading** on API calls and reduced **40%** rendering time
- Built **RESTful API** and controllers using **Express.js** to fetch and update data in the database
- Implemented JWT authorization that allows users to stay authorized between services and reduced login times
- Designed a database schema and implemented it in **MySQL** to support backend data transmission
- Migrated applications and databases from Site Ground Cloud hosting to Google Cloud Platform and made backups

### Maxwell Stanley Hydraulics

Iowa City, IA | 02/2022 – 05/2022

#### Data Engineer, Intern

- Tested various data smoothing algorithms using **Python** and recorded the performance of each algorithm
- Reduced rendering time by **23%** while maintaining **98%** data accuracy through new algorithms
- Updated and inserted data from disparate data sources using **SQL** and created data views using Python
- Optimized and analyzed modules written in JavaScript to implement better software engineering practices

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## PROJECTS:

### DATA SORTING VISUALIZER | [Demo website:](#) [GitHub:](#)

Data visualization tool developed with React.js

- Developed a web application for visualizing data sorting algorithms with **React.js**
- Implemented animated and randomized Insertion Sort, Selection Sort, Quick Sort, Merge Sort, and Bubble Sort
- Designed the styling and animation with Bootstrap and Framer Motion

### MUSIC SIMULATOR | [Demo website:](#) [GitHub:](#)

Web application developed with Vanilla JavaScript

- Built a musical instrument simulator application capable of real-time user interaction
- Implemented a REST API to allow users to sign up with their email for further updates
- Developed the server with **Node.js** and deployed it on Heroku to handle user interactions

### FEEDBACK COLLECTOR | [Demo website:](#) [GitHub:](#)

web application developed with React.js

- Built a customer feedback web application for Iowa Reading Research Center eLearning software using **React.js**
- Designed and developed an automatic daylight and night mode feature for the website's UI/UX
- Implemented Real-time Validation using React Hooks to track users' input on the website

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## TECHNICAL SKILLS:

- **Languages:** Python, JavaScript, TypeScript, C, C++, Java, Haskell, Go, PHP, HTML, CSS
- **Technologies:** Node.js, React.js, Vue.js, Express.js, Redux, jQuery, Bootstrap, SQL, MySQL, MongoDB, Amazon Web Services(AWS), Google Cloud Platform(GCP), Git, Unit Testing, Linux, Unix