Kyle Reinholdtsen

Software Engineer

About

Proficient full stack developer with 1+ years of experience in web programming, object-oriented design, distributed systems, and machine learning. Thrives in collaborative environments and works effectively in teams to deliver high-quality software.

Skills

Languages

- Java, JavaScript, TypeScript, HTML, CSS, Python, C#, SQL.

Tools & Platforms

- React, Angular, Node.js, Express, REST APIs, HTTP, Docker, AWS, Linux, Git.

Certifications

- AWS Certified Cloud Practitioner.

Education

06/2021–12/2023 **B.S. Computer Science & Engineering**, *University of Washington*, Seattle

- ***Classes:*** Distributed Systems, Operating Systems, Data Structures & Algorithms, Compilers, Machine Learning, Artificial Intelligence, Software Engineering, Computer Vision, Programming Languages, Systems Programming, Database Systems, Interaction Programming, Client-Side Development.
- ***GPA:*** 3.88 (Cum Laude, Dean's List).

Experience

01/2022–03/2023 **Software Engineer**, *Husky Robotics, University of Washington*, Seattle

- Developed the mission control website for operating the team's rover using JavaScript, React, and Redux.
  - Designed and implemented a custom WebSocket-based messaging protocol to enable real-time, bidirectional communication between the mission control website and the rover.
  - Created UI elements to display rover camera feeds and telemetry data (position, power, velocity).
  - Implemented a 3D rendering of the rover with React Three Fiber, dynamically updated in real-time using telemetry data.
- Developed a Unity simulator that emulates the rover's cameras, motors, wheels, and sensors in a 3D virtual environment, and transmits camera feeds and telemtry data to the mission control website.
  - Enabled users to orbit the rover within the simulator using intuitive mouse controls.
  - Added functionality to configure the rover's intrinsic camera parameters for enhanced simulation accuracy.

Projects

Paintle, paintle.net, GitHub

- Created Paintle, a website inspired by Wordle where users solve a daily puzzle by painting a 5x5 grid.
- Developed the frontend using Angular, ensuring an accessible interface for both desktop and mobile users.
- Built the backend with Node.js and Express to serve webpage content and handle API requests.
- Deployed the application using Docker containers on AWS Fargate, leveraging load balancing for scalability.

MCQuest, GitHub

- Collaborated with a team of 5 to create an online multiplayer game within Minecraft, where players explore a fantasy world, complete quests, slay enemies, and upgrade their character.
- Followed an Agile development cycle with continuous integration and continuous deployment (CI/CD) to streamline updates, automate testing, and maintain code quality.
- Developed server-side game logic using Java such as physics calculations, item and skill behavior, and data persistence.

Seattle – WA

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