Kyle Clapper

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EXPERIENCE

SOFTWARE ENGINEERING INTERN | Jabra   September 2023 - Present

- Raised the value proposition for a new product by integrating an embedded AI model to enable voice commands.
- Prevented project delays by building firmware features critical to production line testing and calibration.
- Increased firmware portability and reduced audio tuning effort by integrating a new DSP platform with limited documentation and resources.
- Reduced firmware build errors and enabled over-the-air updates by using Microsoft Azure to build nightly and release CI/CD pipelines.
- Automated the distribution of internal mobile apps and customer facing SDKs by using Microsoft Azure and Firebase to build a CI/CD system.
- Enabled usage of a battery module by building a communication interface over I2C.

TEACHING ASSISTANT | UMass Boston   September 2022 - December 2023

- Enhanced student outcomes in the data structures and algorithms course by changing the curriculum to increase engagement in TA lead discussion sections.

SENIOR REACTOR OPERATOR | MIT Nuclear Reactor Lab   May 2019 - January 2022

- Licensed senior reactor operator in charge of operation and emergency response for the 6MW nuclear reactor on MIT campus.
- Preserved institutional knowledge by leading a team to update procedures and training manuals to reflect changes in equipment and best practices.

PROJECTS

BOGGLE | Typescript, React   boggle.kyleclapper.dev

- Boggle game component built with React and NPM.
- Enhanced maintainability by using the Observer and Strategy design patterns to separate the core game logic from other concerns.
- Achieved rapid deployment by building a CI/CD workflow to perform automated testing and deployment to GitHub Pages and NPM.

TULIP | C#, ASP.NET, Javascript   github.com/kclapper/tulip

- AI and user chat system designed to improve the UX of a PhD research project.
- Reduced maintenance effort by creating an interface for SAP connections using the Builder and Command patterns.
- Decoupled the development environment from the production database by building a custom CLI extension to automate the local database setup process.

TAKE COUNTER | React, Electron, AWS   takecounter.kyleclapper.dev

- MacOS app currently used by Power Station recording studio in NYC.
- Made a CI/CD workflow with automated testing and deployment to AWS S3.

BADSTATS | Python, Flask, Kubernetes   github.com/kclapper/BadStats

- Spotify meta-data visualization website made with Flask.
- Eliminated deployment cost by building a self managed Kubernetes cluster, using K3S, on Oracle Cloud Infrastructure.

SKILLS

LANGUAGES

C • Java • Typescript
C# • LISP • Python
HTML • CSS • Javascript

DISCIPLINES

Firmware • Back End
DevOps • Front End

TOOLS

GitHub • Docker • Kubernetes
Jira • Confluence • Ansible
AWS • GCP • Azure

EDUCATION

MS COMPUTER SCIENCE

UMass Boston | May 2024

BS ENGINEERING

UMass Lowell | May 2019

CERTIFICATIONS

- CompTIA A+
- AWS Cloud Practitioner

COURSEWORK

- Software Engineering
- OOP Design Patterns
- Computer Networks
- Concurrent Programming
- Applied Cryptography
- Database Management
- Operational Semantics
- Analysis of Algorithms
- Applied Machine Learning
- Compilers
- Theory of Computation