Kyle Clapper

Summary

Tiny ML developer with full stack experience from metal to cloud. Versatile and quick to adapt to new challenges.

Contact

kclapper

Kyle Clapper

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KyleClapper.dev

Education

MS COMPUTER SCIENCE
UMass Boston | May 2024

BS CHEM. ENGINEERING
UMass Lowell | May 2019

Disciplines

- Machine Learning
- Embedded
- Bluetooth
- Audio
- DevOps
- Software Architecture
- Web Development

Skills

- C / C++
- C# / .NET
- Typescript
- Python
- HTML / CSS
- Git
- Containers
- CI/CD
- AWS/GCP/Azure

Products

- Jabra Perform 75
- Jabra Perform 45 SE
- BlueParrott M500-XT

Experience

EMBEDDED MACHINE LEARNING ENGINEER | GN — July 2024 - Present

- Improved embedded software efficacy by identifying systemic issues, proposing a new architecture, and overseeing it's implementation across 6 Bluetooth headsets.
- Reduced time to market by designing the new architecture to be platform independent, allowing reuse across chipsets.
- Improved product quality while reducing QA overhead by designing the new architecture to use robust unit testing.
- Designed a voice recognition ML model and runtime for resource constrained embedded systems.
- Reduced manual QA testing by building a PC application for headset test automation.
- Shipped product features quickly by coordinating with outside ML and DSP vendors to tune and integrate third party software components.
- Automated manual processes by building a CI/CD pipeline to build, sign, and distribute the BlueParrott Updater PC application.

SOFTWARE ENGINEERING INTERN | GN — September 2023 - May 2024

- Prevented project delays and ensured product consistency by building production line calibration and testing features.
- Increased firmware portability while reducing 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

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

- Recording studio MacOS app used by Power Station, NYC and Fust Post, London.
- Made a CI/CD workflow with automated testing and deployment to AWS S3.

BOGGLE | Typescript, React — boggle.kyleclapper.dev

- Enhanced maintainability by using the Observer and Strategy design patterns to separate the core game logic from other concerns.
- CI/CD workflow for automated testing and deployment to GitHub Pages and NPM.