# Kyle Clapper

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## PROJECTS

### TAKE COUNTER  | JAVASCRIPT, REACT, BOOTSTRAP, ELECTRON
**2023 | https://takecounter.kyleclapper.dev/**

- Helped an audio engineer track takes during recording sessions at Power Station by building a MacOS app.
- Improved user experience by adding re-assignable global keyboard shortcuts.
- Increased development speed and reliability by building a CI/CD workflow with automated testing and deployment to AWS S3.

### MCODE ISOTOPE  | PYTHON
**2021 | https://github.com/kclapper/MCODE-Isotope**

- Improved readability and maintainability of a data retrieval program by refactoring the code base, following principles in "Clean Code" by Robert C. Martin.
- Improved the UX for the MIT NRL Reactor Engineer by simplifying the installation process and adding features such as a detailed help prompt.

### BADSTATS  | PYTHON
**2021 | badstats.offtherailsradio.org**

- Built a website to expose and visualize Spotify meta-data using Flask.
- Eliminated deployment cost by building a self managed Kubernetes cluster, using K3S, on Oracle Cloud Infrastructure.

## EXPERIENCE

### TEACHING ASSISTANT  | ALGORITHMS AND DATA STRUCTURES
**September 2022 - Present | UMass Boston**

- Taught discussion sections where students get practice with lecture material.
- Created additional course materials in response to student needs, including; slide decks, example programs, and puzzles.
- Graded student programming projects, including a written report.
- Held office hours to provide additional support to students.

### MIT NUCLEAR REACTOR LABORATORY  | SENIOR REACTOR OPERATOR
**May 2019 – January 2022 | Cambridge, MA**

- Passed NRC licensing exams for a Senior Reactor Operator license.
- Ensured the safety of personnel, the public, and the environment by supervising proper operation and maintenance of the reactor while on shift.
- Prevented a significant radiation accident by shutting down the reactor within 30 seconds after seeing alarms and abnormal equipment readings.
- Improved the accuracy of documentation by leading a group of 3 in updating procedures and training manuals to reflect equipment changes and best practices.
- Took a proactive role during a facility outage by leading operators on shift to finish tests and calibrations ahead of schedule.

### 91.5 FM WUML, LOWELL  | CHIEF ENGINEER
**December 2016 – May 2019 | Lowell, MA**

- Increased the accessibility of audio engineering to club members by creating a standardized training and certification system.
- Assisted in the studio renovation by installing audio equipment, wiring logic circuits, and building a remote control and troubleshooting system.
- Ensured broadcast continuity by being on call 24/7 for equipment troubleshooting.
- Contributed to the annual charity benefit concert as the head organizer in 2016 and sound engineering coordinator in 2017 and 2018.

## SKILLS

### PROGRAMMING
Javascript • Python • Java Lisp • HTML • CSS

### LIBRARIES/FRAMEWORKS
Electron • React • Bootstrap

### TOOLS/PLATFORMS
GitHub • AWS • GCP • OCI Docker • Kubernetes • Ansible

## EDUCATION

### UNIVERSITY OF MASSACHUSETTS, BOSTON
MS COMPUTER SCIENCE
**May 2024 | Boston, MA**
College of Science and Mathematics
**Cum. GPA:  4.0**

### UNIVERSITY OF MASSACHUSETTS, LOWELL
BSE CHEMICAL ENGINEERING, NUCLEAR OPTION
**May 2019 | Lowell, MA**
Francis College of Engineering
**Cum. GPA:  3.16**

## CERTIFICATIONS

- CompTIA A+
- AWS Cloud Practitioner

## COURSEWORK

- Applied Cryptography
- Database Management
- Operational Semantics
- Analysis of Algorithms
- Applied Machine Learning
- Compilers
- Theory of Computation