

# Rachel Townson

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## EXPERIENCE

**Shure Incorporated** *System Verification Engineer* | Niles, IL

2022 - Present

Engineer II

2024 - Present

- **Test Automation for Embedded Firmware:** Increased automation test coverage to over 50% by engineering comprehensive audio and firmware tests in Python. Identified 20+ defects across various products spanning multiple phases of the product development lifecycle. Worked with a team of test engineers to develop a UI-based testing framework using computer vision.
- **Manual Testing of Embedded Firmware:** Conducted end-to-end, user workflow, and audio quality tests. Collaborated with cross-functional teams to resolve 5+ critical defects across four embedded products and their mobile apps prior to release.
- **REST API Test Automation:** Collaborated with a team of 10+ developers to revamp legacy automated API tests within three weeks. Elevated test reliability to 100% and extended coverage to 20+ devices. Developed two essential code utilities and uncovered one major bug during the process.
- **Code Reviews, Source Control, and CI/CT:** Played an integral role in code reviews for 6+ developers, which enhanced code reliability and enforced coding standards. Assisted the team with the transition from Quality Center ALM to Xray (Jira) test management and helped develop new Jenkins pipelines for CI/CT. Identified features to include in CI/CT, smoke, and functional test plans for multiple product lines.

Engineer I

2023 - 2024

- **Functional Testing of Desktop App:** Executed automated and manual functional tests on Mac and Windows using Selenium, then tracked test progress with QC ALM and documented defects in Jira. Revealed over 20 software bugs in one month and helped the team achieve deadlines ahead of schedule by effectively verifying bugs as fixes were released.
- **Mobile App Test Automation:** Designed the Page Object Model (POM) and Appium automation infrastructure for a new mobile app. Created detailed documentation and UML diagrams in Confluence. Streamlined tedious aspects of POM creation for use across multiple projects and facilitated test code reuse across iOS and Android apps.

Intern + Part-Time Associate

2022 - 2023

- **Innovative Testing Strategies:** Implemented new testing strategies using AI technologies like computer vision. Established infrastructure that accelerated the creation of 10+ automated test cases and broadened automation coverage.

**AccumTech** *Software Developer* | Livonia, MI

2021 - 2022

- **Front End:** Created 5+ intuitive dashboards for a web app using ReactJS that enabled healthcare insurance providers to interact with their data efficiently. Developed 3+ reusable components that accelerated future UI development.
- **Back End:** Built 20+ new REST API endpoints in an existing codebase using C#/.NET to access SQL databases.
- **Cross-functional collaboration:** Attended meetings with customers and business analysts while gaining valuable insights into the business side of the application.

## PROJECTS

**Collaborative Audio/Video Editor (CAVE)** | *Software Developer* ★ **Amazon Sigma Award** Best Overall Winner 2023

- Collaborated with Team TechSmith to develop a multi-platform web application enabling multiple users to synchronously edit audio/video projects. Developed a ReactJS front end, Node.js API, and deployed the app using Microsoft Azure. Leveraged FFmpeg for WebAssembly to process media and export projects. Integrated synchronous editing capabilities using WebSockets.

**Intra-Building Navigator** | *Project Lead*

★ Second Prize at **Code Green hackathon** 2022

- Worked with a team to build a Flutter web and mobile app that uses AI image processing (OpenCV) and pathfinding algorithms to guide a user between spaces in a building. Managed the Github repository, Trello board, and weekly meetings.

## LEADERSHIP

**Artificial Intelligence Club at MSU** | *Marketing Director*

2021 - 2023

- Coordinated all social media campaigns for the club, orchestrated the planning of club events, supervised club finances, directed recruitment efforts for new members and sponsors, and designed and procured promotional materials.

## EDUCATION

**Michigan State University** | *B.S. Computer Science with Honor* | *Minor in Cognitive Science* | *Honors College*

## SKILLS + INTERESTS

Python	HTML/CSS	ReactJS	Selenium	Git/SVN	Audacity
C++/C	C#/.NET	Flask for Python	Appium	Jira/Trello	Pro Tools
JavaScript	SQL	Flutter SDK	OpenCV	Jenkins	Canva Pro

## CERTIFICATIONS

Scaled Agile Framework (SAFe)
Dante Certification Levels 1 and 2
Shure Academy