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BRE RICKNER   FULL-STACK SOFTWARE ENGINEER

Software engineering, oh what a treat
A world of quirks and bugs to defeat
We write and code, and then we test
Unless you ask Bre, who thinks TDD is best

We curse at compilers, and at runtimes too
And wonder why our code isn't doing what it's supposed to do
We chase after null pointers and race conditions
And all sorts of strange coding traditions

So here's to software engineering, a world of its own
With its own language, its own tone
We may grumble and complain, but we all know
That there's nothing quite like the thrill of making software flow!

WORK EXPERIENCE

Associate Software Quality Engineer
Quantum Metric   August 2022 – March 2023

Swift, Typescript, CSS, Objective-C, UIkit, Selenium Grid & WebDriver, Redis, SwiftUI, Xcode, XCUITest, XCTest, Instruments, TestFlight, Charles Proxy, Gitlab, Jira, Docker, Postman

- Built a UIKit Test application to test the functionality of replay capture software using the iOS SDK instrumentation.
- Conducted instrumentation testing to verify that software components are correctly instrumented, and ensure that data is accurately collected and reported.
- Worked closely with development teams to ensure that the application is fully compatible with the hooking mechanism, and to ensure that customer sites remain unaffected by changes to the application.
- Developed and maintained test scripts and libraries to increase testing efficiency and coverage, and minimize test maintenance effort.
- Used CI/CD tools to manage test execution and generate reports.
- Conducted regression testing to verify that new application features and updates do not impact the functionality of existing features, and ensure that customer sites remain unchanged.
- Developed and executed automated tests using Redis as a caching layer to increase test performance and reduce data access time.
- Participated in code reviews and contributed to process improvements to enhance software quality and maintainability.
- Developed integration testing frameworks using Selenium WebDriver to test web applications on multiple browsers and platforms.

PROJECTS

IoT-Town
Using LoRaWAN IoT devices to collect and analyze data for open-source datasets
Javascript, C++/Arduino, Python, Helium Console, Kaggle

- Customized the decoder function to efficiently extract and process data from sensor payloads while also implementing complex business logic to ensure optimal performance and accuracy of data processing, resulting in a significant improvement in data quality and actionable insights
- Automated POST requests to collect and collate data from Helium Console API into a centralized Google Spreadsheet, resulting in streamlined data collection and significant time savings for the team
- Published an open-source dataset related to environmental monitoring, achieving a 100% usability rating on Kaggle and contributing to the advancement of research and development

FuzzFeeds
An IoT integration system for pets using custom wearable IoT device
Python, ThingSpeak, C++/Arduino, HTML, CSS, Bootstrap

- Collaborated with a team to architect the MVP for an innovative IoT integration system that incorporated wearable IoT devices and social media APIs, allowing for real-time monitoring and 'tweeting' of my cat's whereabouts
- Integrated Arduino (C++) and Python scripts into their respective microcontrollers to parse and output GPS coordinates from NMEA strings, resulting in improved accuracy and reliability of location data for real-time location tracking
- Automated POST requests to Twitter's API using Python to extract GPS coordinates from the wearable IoT device, resulting in real-time updates on the location of our beta kitty

LEARNING INSTITUTIONS

Holberton School Tulsa - September 2020 - April 2022
Full-Stack Software Engineering - Specialization in Augmented and Virtual Reality

C, Python, Javascript, C#, Bash, Unity, MySQL, HTML, CSS, Flask, Jinja, jQuery, Nginx, Vagrant, VirtualBox, pytest, doctest

- **Foundation in Computer Science -** *September 2020 - June 2021*
- **Augmented & Virtual Reality Specialization -** *June 2021 - April 2022*

Central Michigan University - August 2008 - May 2010
General Education

- **National Society of Collegiate Scholars -** *Member*
- **Dean's List -** *Fall 2008, Spring 2009, Fall 2009*
- **Leadership Safari -** *Participant*

ORGANIZATIONS

- **Oklahoma Women in Technology (OKWIT) -** Leadership Team - *Spring Retreat Chair*
- **Builder + Backers -** 2022 Summer Cohort - *Builder*
- **Techlahoma -** *Member*