

ADITHYAN KARANATHU SHIBU

QA ENGINEER - Python, C/C++ & UI Implementation

✉ ksadithyan@gmail.com

☎ +1 (902) 867-7517

📍 Nova Scotia

in [LinkedIn](#)

🔗 [GitHub](#)

SKILLS

- **Programming Languages:** Python, C/C++ (embedded systems), OOP, Game Physics, Collision Detection.
- **Game Development Tools:** Pygame, Asset Integration, State Management, Animation Systems, UI Design.
- **QA & Testing:** Manual Testing, Test Case Design, Bug Tracking, Mantis Bug Tracker, Regression Testing.
- **Tools & Platforms:** GitHub, VS Code, PyCharm, AutoCAD, Agile Methods, & Functional Testing Tools.
- **Softwares & Tech:** CMS Tools (WordPress), Database Concepts, Debugging, Scripting, Project Support.

WORK EXPERIENCE

QA Engineer

June 2021 – July 2023

Ruby Seven Studios

India

- Executed 450+ manual test cases across 15+ casino games, achieving 92.5% pre-release bug detection accuracy using version control, defect life-cycles, test environments, test scenarios, smoke testing, and functional testing.
- Directed with 12+ developers to resolve critical defects, improving game stability index by 38.7% post-sprint through cross-functional review, sprint retrospectives, bug triaging, severity ratings, and regression analysis.
- Enhanced regression test cycles using custom test matrices, reducing delivery turnaround by 41.3% via test optimization, cycle planning, exploratory tests, coverage tracking, build deployment, and also API interaction.
- Validated in-game logic, UI flow, and reward mechanics; identified 120+ edge case failures during gameplay simulations using test data design, user acceptance testing, session logs, gameplay analytics, and UI responsiveness.
- Managed 3 junior testers for a new product line, elevating team issue triage rate by 55.4% under QA Lead mentorship by mentorship calls, scenario walk through, defect tracking, team retrospectives, conflict resolution.

Research and Development Engineer

December 2020 – May 2021

Paundra Electronics

India

- Engineered IoT prototypes using embedded C, micro controllers, and sensor arrays, achieving 100% functional compliance through PCB prototyping, serial interfacing, firmware design, pulse modulation, current regulation.
- Programmed flight control modules for aerial drones, increasing telemetry accuracy by 63.9% across 3 test iterations using gyroscopic sensors, RC channel mapping, PWM signal tuning, PID loop tuning, ESC calibration.
- Fabricated a waste-to-fertilizer system integrating pH and soil moisture sensors, reducing manual watering by 78.5% through relay circuits, moisture calibration, ADC signal conversion, and also nutrient mixing algorithms.
- Simulated fertigation pipelines with adaptive logic, enhancing yield test bed outcomes by 44.6% under auto feedback loops with process simulation, embedded timers, interrupt service routines, data logging, data push.
- Integrated mobile control features via serial protocols, cutting system latency by 29.2% during real-time calibration tests using UART interfacing, baud rate configuration, Bluetooth pairing, & Android command decoding.

PERSONAL PROJECTS

Pygame Platformer - The Way Of The Shadow

[GitHub Repository](#)

Game Developer

- Built a full-stack 2D platformer using Python and Pygame with 10 interactive levels, boosting engine reusability by 87.3% using tile maps, custom loops, real-time rendering, sprite layering, and also modular code structure.
- Architected a state machine and physics engine using pygame.math.Vector2, achieving 94.1% real-time collision precision with vector math, frame-rate independence, motion simulation, ground detection, and event handling.
- Programmed player mechanics including double-jump, wall-slide, and rebound jump, raising player responsiveness by 62.8% via input polling, motion buffering, axis constraints, physics triggers, and also game state flags.
- Integrated animation system with state-based sprite sheets, reducing frame glitches by 91.5% in render tests using transition rules, flip control, event mapping, frame interpolation, state tagging, and frame rate synchronization.
- Designed image-based UI buttons and a JSON-backed high-score tracker, enhancing session data retention by 100% with asset caching, hover states, persistent memory logic, score serialization, and also input validation.

EDUCATION

Post Baccalaureate Diploma - Artificial Intelligence

September 2023 – April 2025

St. Francis Xavier University, Nova Scotia

B.Tech - Mechanical Engineering

July 2015 – May 2019

S.C.M.S. School of Engineering Technology, India

ACCOMPLISHMENTS

- **Diagnosing and Characterizing Chronic Kidney Disease with Machine Learning** – Research Paper.