

KIRAN THILAK

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SUMMARY

Software Engineer with 8+ years of experience building and scaling high-performance systems in C, C++, and Go across gaming, traffic management, retail POS, and industrial automation. Proven track record of owning large legacy codebases, leading automation test infrastructure at Ubisoft, and modernizing monolithic systems at scale. Adept at cross-functional collaboration with DevOps, QA, and client teams.

TECHNICAL SKILLS

Languages: C, C++11/17, Go (Golang)

Testing & QA: Google Test, Google Mock, TDD, Automation Framework Development, MFC Stubs

Debugging & Analysis: GDB, WinDbg, Crash Dump Analysis

Platforms & Tools: Linux, Windows, ATL Services, MFC, Serial Communication

Source Control: Git, Perforce, SVN, Microsoft TFS, Visual SourceSafe

Other: Microservices, Legacy Code Modernization, Hardware-Software Integration,

WORK EXPERIENCE

Software Engineer | UST

June 2024 – Present | Thiruvananthapuram, India

Project: Keele (Retail — Point of Sale)

- Developed and maintained a high-throughput Point of Sale backend in C and Go.
- Debugged and stabilized a large monolithic event-based legacy codebase, significantly improving production reliability.
- Drove decomposition of legacy services into a microservice architecture, improving deployment independence and maintainability.
- Produced system flow diagrams and technical specifications to align engineering and client stakeholders on new requirements.

R&D Engineer | Ubisoft

Feb 2022 – April 2024 | Pune, India

Projects: XDefiant, Assassin's Creed Unity (Gaming)

- Built and maintained game automation hooks for XDefiant, improving daily automated test execution reliability.
- Integrated multiple in-house tooling components into the automation framework, reducing manual QA overhead.
- Resolved recurring test pipeline failures, significantly increasing daily test pass rates.
- Mentored junior engineers on clean code practices, automation standards, and code review discipline.
- Analyzed Assassin's Creed Unity's large-scale game codebase and authored automation hooks to expand automated test coverage.
- Integrated Oculus VR device into the automated testing pipeline, enabling VR-specific regression coverage.
- Served as the primary technical contact between the automation team and DevOps/production teams.

Software Engineer | Quest Global

June 2020 – Feb 2022 | Thiruvananthapuram, India

Project: ZAS WGT 200 (Industrial Equipment Automation)

- Developed and maintained C++ and managed C++ DLLs for industrial automation equipment used at client sites.
- Established comprehensive unit test coverage using Google Mock and Google Test across multiple modules.
- Implemented serial port and Modbus communication protocols for reliable hardware interfacing.
- Performed hardware integration and acceptance testing at client locations, ensuring production readiness.

**Software Engineer | ARS Traffic and Transport Technology
India Pvt Ltd**

Mar 2018 – May 2020 | Thiruvananthapuram, India

Projects: Amsterdam Travel Time System, NDW, Surat Smart City ITCS, ESDAL & MINT (Traffic & Transport)

- Designed and deployed load-balanced, fault-tolerant Windows ATL services for real-time license plate matching and data generation.
- Maintained 15+ production services for the National Data Warehouse for Traffic Information (NDW).
- Managed the full suite of C++ services in the Surat Smart City Integrated Traffic Control System.
- Integrated PrimeVision ANPR, Uncanny Vision ANPR, and speed control signboards into live traffic management systems.
- Performed crash dump analysis with WinDbg to diagnose and resolve memory issues, improving system stability.
- Conducted code walkthroughs that surfaced and resolved potential production defects before release.
- Developed internal automation tooling that streamlined team workflows and reduced manual effort.
- Built Driver Instruction Services for ESDAL & MINT, generating optimized routes for abnormal load transport drivers.
- Worked directly with clients to triage, fix, and close issues in SPIRA and Redmine, maintaining a fast resolution turnaround.

EDUCATION

B.Tech in Computer Science and Engineering | 71.4%

Aug 2017

Alliance University, Bangalore, Karnataka, India