Biweekly Report

Name: Tong Li

Period: May 12 - May 25, 2025

Project: Smart Maintenance Platform for Aero Engine Industrial Equipment

Week 1: System Testing Continuation (May 12-18, 2025)

During this week, I focused on continuing and expanding system testing activities:

1. **System Testing (May 12-18)**
   - o Executed comprehensive test cases for all system modules
   - o Conducted performance testing under various load conditions
   - o Performed security vulnerability assessment
   - o Tested data integrity across system operations
   - o Documented test results and identified issues

Time spent: 24 hours

Week 2: System Testing Completion and UAT Support (May 19-25, 2025)

This week was dedicated to completing system testing and supporting the initial user acceptance testing:

1. **System Testing Completion (May 19-21)**
   - o Conducted final validation test cases
   - o Verified bug fixes and performed regression testing
   - o Finalized performance optimization recommendations
   - o Prepared system test summary report
2. **User Acceptance Testing Support (May 22-25)**
   - o Supported initial UAT sessions
   - o Analyzed and categorized user feedback
   - o Implemented critical fixes identified during UAT

Time spent: 10 hours

Completed WBS Items

• 5.2 System Testing (WBS Item, 12 hours) - 95% Complete

• Supporting WBS 5.4 User Acceptance Testing

Challenges & Solutions

The main challenge I encountered was database performance degradation under high concurrent read/write operations during load testing. I addressed this by:

1. Implementing connection pooling optimizations
2. Creating targeted indexes for high-frequency query patterns
3. Developing a read-replica strategy for reporting queries
4. Implementing query caching for frequently accessed data

Next Steps

1. Complete remaining system test scenarios
2. Continue supporting user acceptance testing
3. Prepare database for production deployment
4. Develop database maintenance procedures
5. Create performance monitoring strategy

Total Hours Worked

Total hours for this reporting period: 34 hours