

VieHIS

AI-POWERED
VIETNAMESE
HISTORY CHATBOT



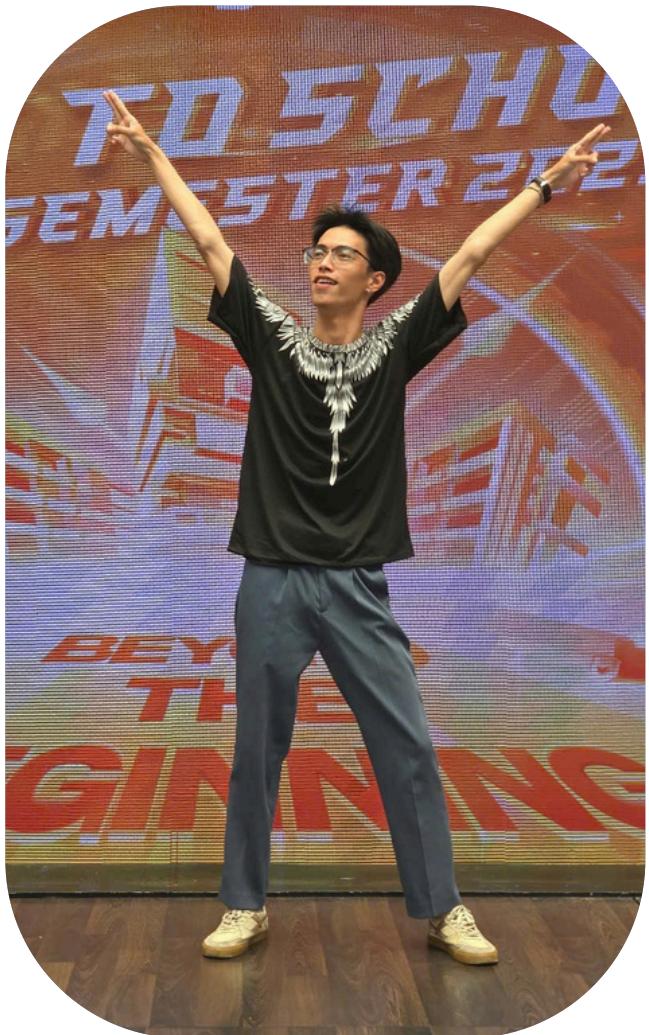
ViiHs INTRODUCING MEMBERS



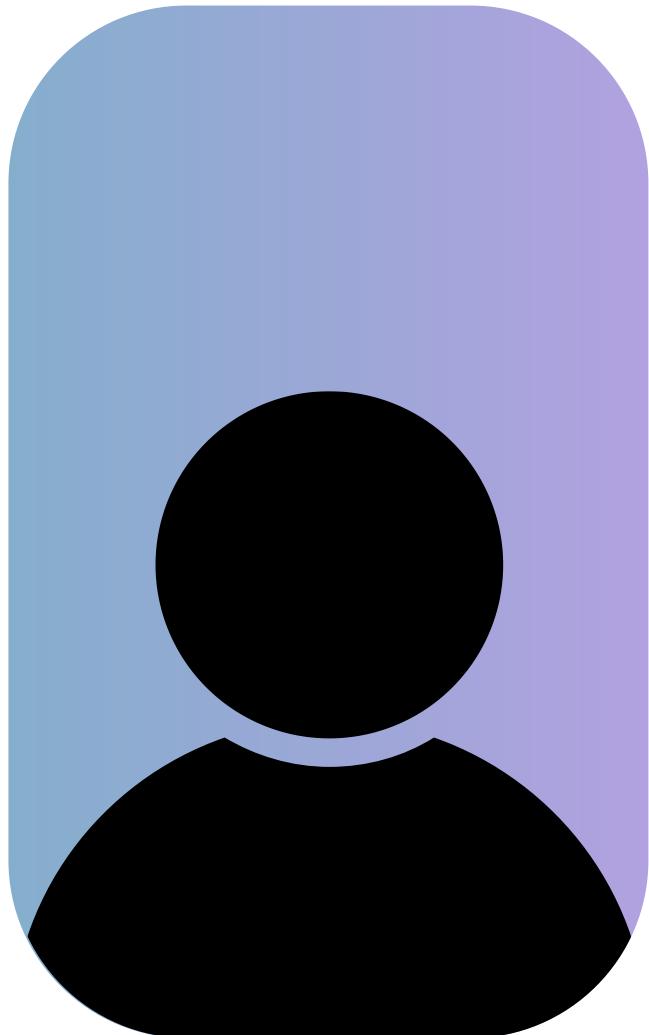
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INTRODUCTION

VIHIS - AI-POWERED VIETNAMESE HISTORY CHATBOT

- 📊 31 Test Cases | 85%+ Coverage |
- 6-Phase AI Testing Workflow
- 🎯 Competition: AIFORSE 2025



CODEBASE ANALYSIS



- ✓ CORE FEATURE:
GEMINISTUDYSERVICE
(AI CHATBOX)

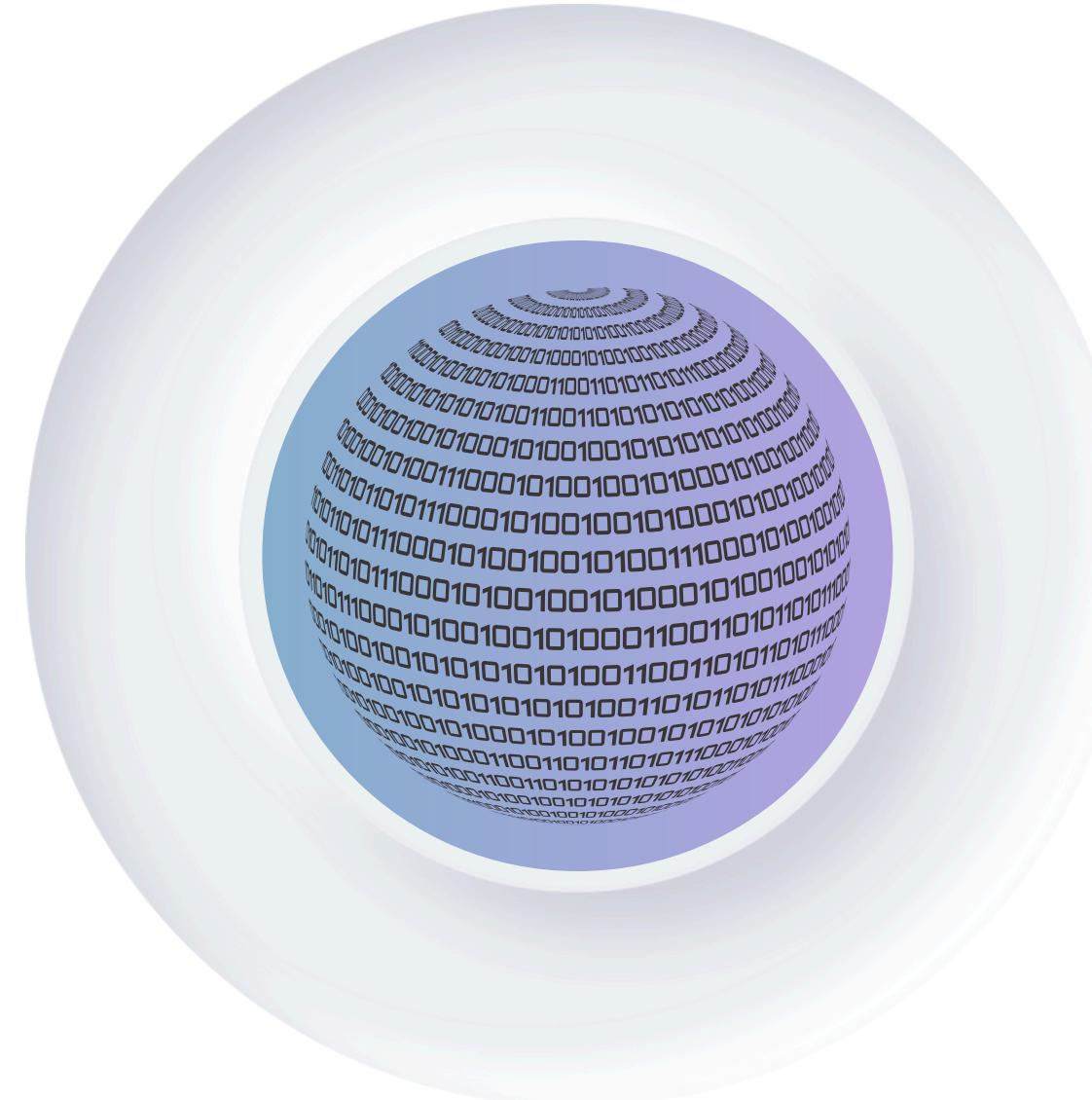


- ✓ ANALYSIS: 3 MAIN
METHODS
(ASKASYNC,
SEARCHWEBASYNC,
HELPER FUNCTIONS)



- ✓ AI SUPPORT: CODE
STRUCTURE AND
DEPENDENCIES
ANALYSIS





TEST MATRIX





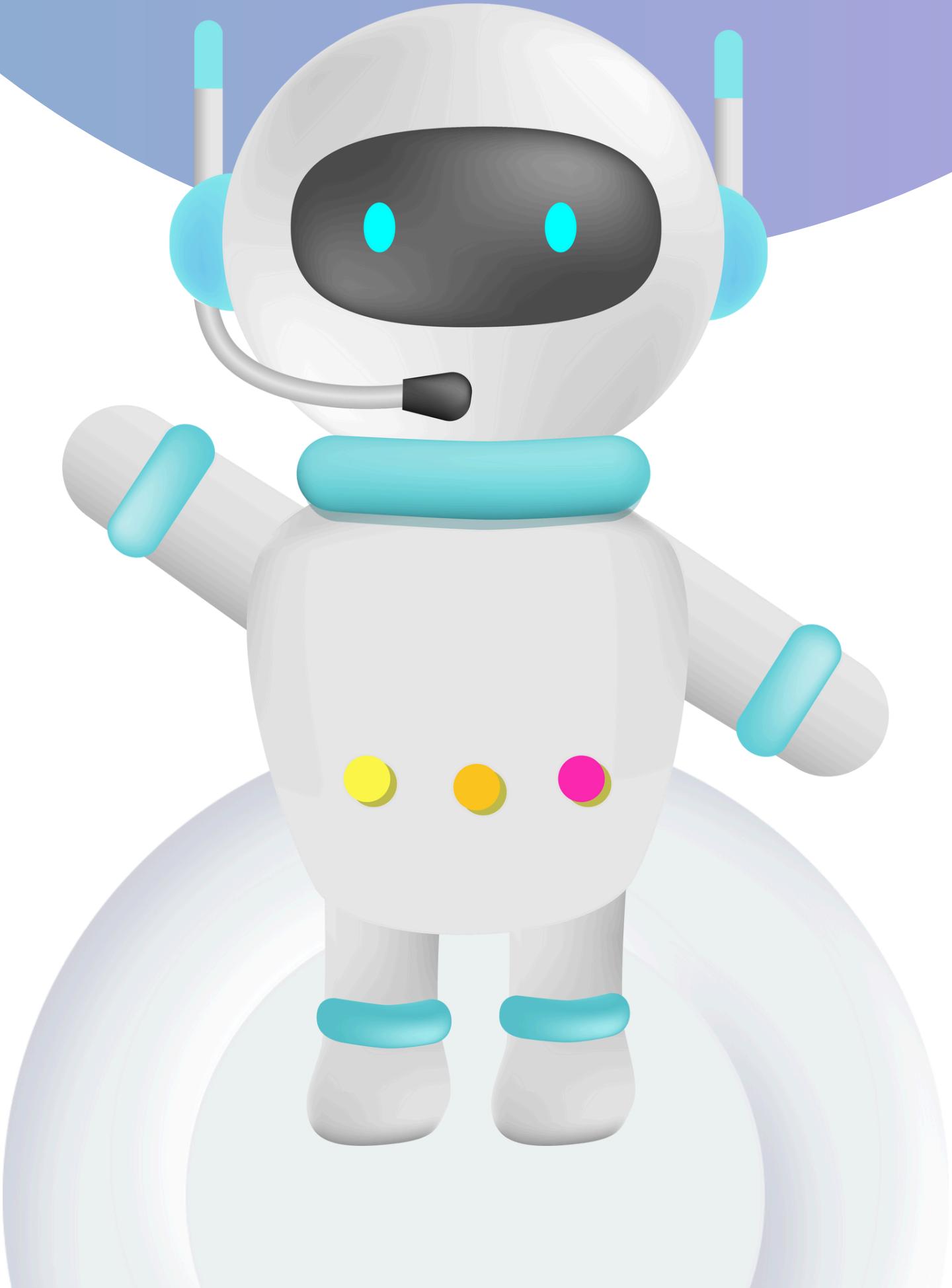
⚡ AI AUTOMATIC CODE GENERATION

- ✓ Unit Tests: GeminiStudyServiceRealTests.cs (26 tests)
- ✓ Integration Tests: GeminiStudyServiceIntegrationTests.cs (5 tests)
- ✓ Framework: xUnit + FluentAssertions + Moq
- 🤖 AI support: Generate complete test code from test cases matrix



DEBUG & FIX ISSUES

- ✓ Fixed: NullReferenceException, API key issues
- ✓ Fixed: Model compatibility, timeout handling
- ✓ Fixed: MongoDB connection, Gemini API integration
- 🤖 AI support: Error analysis and solution recommendations





OPTIMIZE TESTS

01

REAL API INTEGRATION:
MONGODB ATLAS + GEMINI
API

02

RATE LIMIT SOLUTIONS:
SEQUENTIAL TESTING,
DELAY STRATEGIES

03

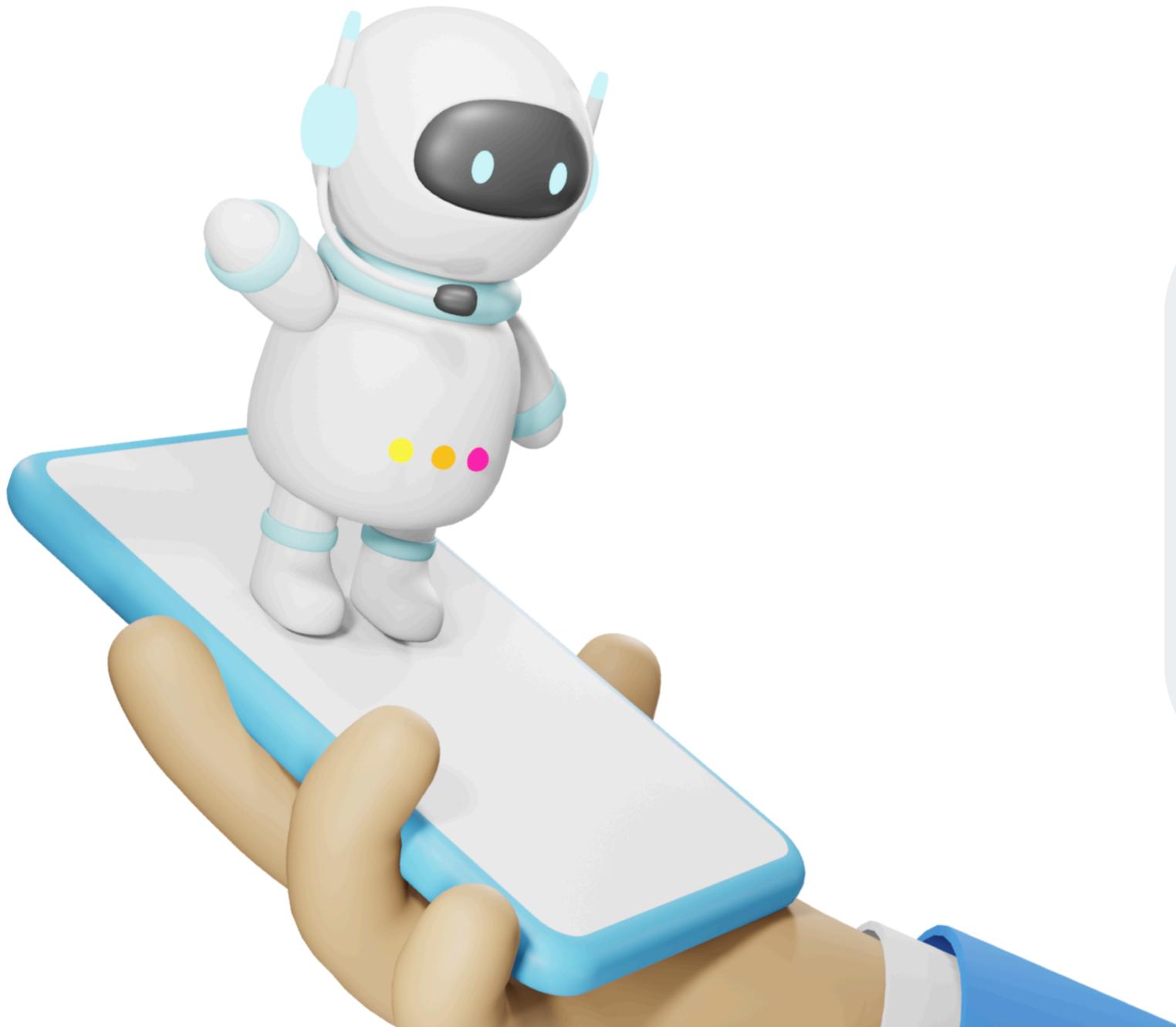
COVERAGE OPTIMIZATION:
MOCK TESTS FOR 100%
COVERAGE

04

 AI SUPPORT: SUGGEST
MOCKING STRATEGIES AND
OPTIMIZATION



SUMMARY OF RESULTS



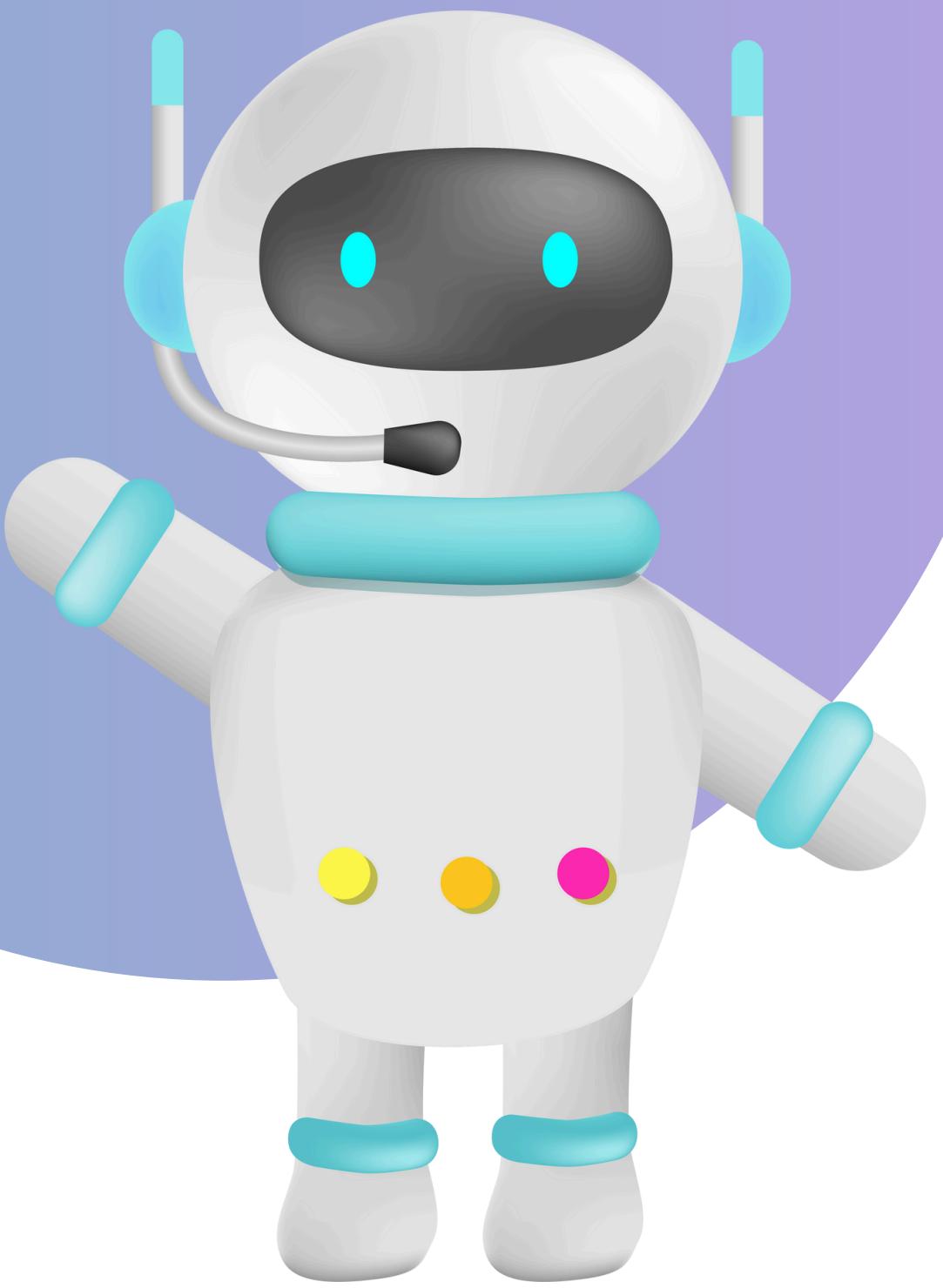
- ✓ Documentation: README.md, test summaries
- ✓ Coverage Report: HTML visualization
- ✓ Demo: 31 tests, 85%+ coverage, real API integration
- 🤖 AI support: Documentation synthesis and update



PROJECT ACHIEVEMENTS

-  31 Test Cases (26 Units + 5 Integration)
-  19 Tests PASSED (61% success rate)
-  Coverage: >85% (HTML report)
-  Real API Integration:
MongoDB Atlas + Gemini API
-  Complete Documentation:
6-phase workflow





VieHS
THANK
YOU

