



Strategic Quality Assurance for Healthcare Applications

Client

One of the premier academic medical centers in the United States dedicated to excellence in patient care, education, and research. Consistently ranked among the top 10 hospitals in the U.S. News & World Report 'Best Hospitals' list.

Business Requirement

- End-to-end testing solutions for healthcare applications
- Expedite launch of bug-free mobile and web applications to production
- Maintenance of recently launched mobile and web applications
- Automation of regression/smoke test suite for mobile and web apps
- Support migration of legacy applications to latest technology
- Automation of redirect verification as a part of migration
- Accessibility testing to ensure WCAG 2.1 compliance
- Performance testing to measure performance of site and specific functionalities
- Continuous Integration (CI)/Continuous Delivery (CD) with Jenkins

Technology Stack

- Automation testing
- Appium for mobile applications
- Selenium WebDriver for web applications
- Cucumber framework
- Continuous integration through Jenkins
- Performance testing using JMeter
- API testing using Postman
- Accessibility testing using VoiceOver
- Data analysis using Oracle SQL Developer



Framework Highlights

- Combination of Cucumber and Page Object Model
- Detailed reporting
- Sends email notification with attached report
- Easily customizable for multiple platforms
- Captures screenshot for failed scenarios

QA Services Offered

- Functionality testing based on acceptance criteria
- Bug fix confirmation testing
- Regression testing
- Automation testing - mobile and web
- Performance testing
- API testing
- Data analysis in DB

Deliverables

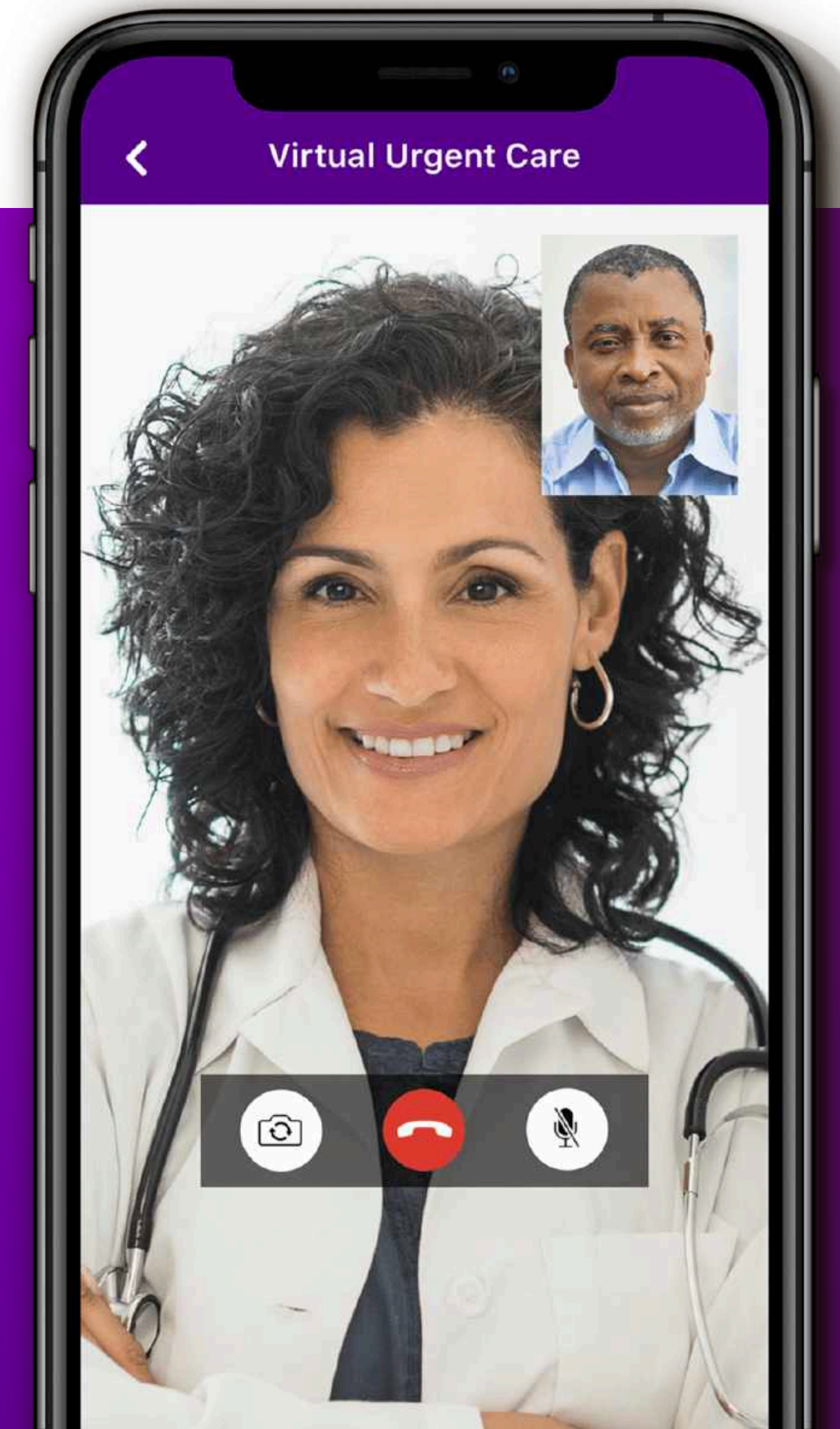
- Manual test suite in Jira/Confluence
- Automated test suite in Bitbucket repo
- Bug reports in Jira
- Performance test reports
- Data analysis report

Key Achievements

- Improved sprint velocity resulted in faster releases
- Boosted deployment speed by parallelizing Jenkins pipeline
- Automated deployment process - CI/CD
- Automated regression/smoke test cases and made it a Jenkins job in CI/CD pipeline
- Mobile and web applications in maintenance mode were completely automated
- WCAG 2.1 compliance testing using Screen Reader - VoiceOver in Mac and Narrator in Windows
- Automated redirect verification using Rest Assured as a part of application migration
- Database testing querying DB using SQL Developer
- Performance testing was carried out using JMeter on request

Business Benefits

- Overall Sprint velocity increased by 30%
- Deployment time reduced from 4 hours to 20 minutes
- Regression automation covered difficult test cases and curtailed testing cycle time by 60%
- Redirect verification was automated – scaled-down execution time from 6 hours to 10 minutes
- Reduction in time and costs with re-usable automation test scripts
- Improved customer satisfaction



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