SISTEM OPTIMASI PELAYANAN PELANGGAN PADA TOKO JOKI GAME MOBILE LEGENDS MENGGUNAKAN CHATBOT WHATSAPP

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Abstrak

Toko Joki Fatkhi, penyedia jasa joki game Mobile Legends, menghadapi kendala dalam pelayanan pelanggan yang masih dilakukan secara manual, seperti membalas pesan satu per satu, mengirimkan daftar harga, menyediakan formulir pemesanan, hingga pengecekan pembayaran. Proses ini menyebabkan keterlambatan respons dan potensi kesalahan dalam transaksi. Penelitian ini bertujuan untuk mengoptimalkan pelayanan pelanggan melalui pengembangan sistem chatbot berbasis WhatsApp. Metode yang digunakan adalah Research and Development (R&D) dengan pendekatan model pengembangan Agile. Sistem dikembangkan menggunakan TypeScript, Express.js, Node.js, serta WhatsApp Web.js untuk integrasi WhatsApp. Database menggunakan PostgreSQL dan Drizzle ORM. Pengujian dilakukan dengan metode black-box testing, beta testing, dan evaluasi ahli IT. Hasil black-box testing menunjukkan tingkat keberhasilan fungsional sebesar 100% pada semua skenario. Hasil beta testing memperlihatkan peningkatan kepuasan pelanggan hingga 82% dan admin sebesar 83,33%, dengan penerimaan pengguna pada tahap close beta testing mencapai 97% (sangat diterima). Respon rata-rata meningkat dari ±3 menit menjadi ±10 detik, proses pemesanan berkurang dari ±15 menit menjadi ±3 menit, dan backlog utama pengembangan sistem berhasil direalisasikan hingga Sprint 4. Sistem dihentikan pada iterasi ke-4 karena seluruh kebutuhan inti telah terpenuhi dan fokus berikutnya diarahkan pada pemeliharaan serta monitoring.

Kata kunci : Chatbot, WhatsApp, Mobile Legends, Toko Joki, Agile, Black-Box

CUSTOMER SERVICE OPTIMISATION SYSTEM AT MOBILE LEGENDS GAME BOOSTING STORE USING WHATSAPP-BASED CHATBOT

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Abstract

Toko Joki Fatkhi, a Mobile Legends game boosting service provider, faced challenges in customer service that was still handled manually, such as replying to messages one by one, sending price lists, providing order forms, and verifying payments. This process often led to response delays and potential errors in transactions. This research aims to optimize customer service through the development of a WhatsApp-based chatbot. The method used is Research and Development (R&D) with an Agile development model approach. The system was developed using TypeScript, Express.js, Node.js, and WhatsApp Web.js for WhatsApp integration. The database was implemented using PostgreSQL with Drizzle ORM. Testing was conducted using black-box testing, beta testing, and IT expert evaluation. The black-box testing results showed a 100% functional success rate across all scenarios. Beta testing revealed an increase in customer satisfaction to 82% and admin satisfaction to 83.33%, with user acceptance during close beta testing reaching 97% (highly accepted). The average response time improved from approximately 3 minutes to 10 seconds, while the ordering process was reduced from 15 minutes to 3 minutes. Furthermore, all primary backlogs were successfully realized by Sprint 4, at which point the iteration was concluded since all core requirements had been fulfilled. The subsequent focus is directed toward system maintenance and monitoring..

Keyword**:** *Chatbot, WhatsApp, Mobile Legends, Boosting Service, Agile Development, Black-Box*