QBurst | A High AI-Q™ Company

AI-Powered Insurance Renewal and Workflow Automation

Automating labor-intensive insurance renewal workflows and documentation processes for a leading provider using generative AI and intelligent data extraction.

Overview

- Developed an automated insurance platform leveraging generative AI (Azure OpenAI GPT-4) and data extraction technologies to automate critical renewal workflows.

- The solution automatically downloads, extracts data from, and compares policy and quote documents from 100+ carrier websites.

- Automated the generation of over 50 carrier-specific form types (DOCX, PDF) and integrated them with Salesforce and NowCerts APIs.

- Significantly reduced manual workload and operational costs by simplifying complex, time-consuming, and repetitive insurance tasks, thereby enhancing overall efficiency.

Client Profile

A leading provider of business, property, personal, and auto insurance based out of Florida. They offer outstanding customer service and expedited quoting services through an online insurance quote portal.

Challenges: Manual Workload and Documentation Complexity

- **Manual Data Extraction:** Labor-intensive manual efforts were required to extract relevant data from policy documents across various carrier websites.

- **Complex Form Generation:** Cumbersome generation of 50+ different form types that required precise matching to various carrier template specifications.

- **Workflow Coordination:** Difficulty in streamlining complex workflows spanning internal employees, offshore teams, and carrier communication.

- **Accuracy and Compliance:** Ensuring accuracy in data extraction and generating documents that perfectly match required carrier formats (e.g., editing Microsoft DOCX).

QBurst Solution: Generative AI for Automation

We developed a comprehensive insurance platform centered on generative AI capabilities to automate the policy renewal ecosystem. The solution integrates with over 100 carriers, drastically reducing the manual steps involved in documentation.

- **Intelligent Data Extraction:** The solution uses Python libraries (DOCX, PDF, OCR) and Azure OpenAI (GPT-4 models) to read quote files (PDF/images) from multiple carrier formats and accurately extract data.

- **Automated Proposal Generation:** Automatically generates proposal documents in DOCX and PDF formats that match carrier-specific templates using the extracted data.

- **Workflow and Integration:** Automated the workflows for downloading policy declaration documents, creating new policy documents, and updating key systems like Salesforce (for opportunity creation) and NowCerts APIs.

Technical Highlights

- **AI-Powered Code Generation:** Developed a tool to generate automation scripts (Playwright) for policy-related tasks on carrier websites based on simple user instructions.

- **Automated Renewal & Payment Flow:** AI-driven extraction to populate necessary fields in forms retrieved directly from carrier websites for new policy creation.

- **Commercial Project Implementation:** Architected Salesforce org to support complex commercial opportunities, mapping 30+ input fields to create opportunities.

- **Multiprocessing Support:** Platform utilizes Python (Flask, FastAPI) frameworks to support the simultaneous execution of multiple processes for high-speed data handling.

Impact

- **Efficiency & Productivity:** Enhanced efficiency as users can perform data entry, document development, and policy renewals faster.

- **Reduced Operational Costs:** AI-powered automation significantly simplified complex, time-consuming tasks, helping the client reduce manual workloads and associated operational costs by 70%.

- **Seamless Communication:** The system automates email notifications in carrier-specific templates for policy updates and renewals, ensuring professional client communication.

- **Data Accuracy:** Automated downloading, verifying, and updating records ensures higher data accuracy with minimal human error.