



PRODUCT OVERVIEW



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INTRODUCTION TO PRIYA

Introducing Priya, our AI digital assistant for health & human services (HHS) programs, offering fast, accurate, and empathetic answers. Artificial intelligence (AI) will revolutionize customer service, internal operations, and access to knowledge in every HHS program. We have combined the latest AI solutions powered by Microsoft with our deep program knowledge to create Priya, YoungWilliams' proprietary and customizable AI digital assistant. The integration of Priya into our services embodies our commitment to enhancing customer satisfaction and operational efficiency. By leveraging cutting-edge AI technology, Priya bridges the gap created by limited resources, high volume inquiries, and traditional operating hours, ensuring continuous support and transforming customer service and internal operations.

Priya can be used by any Department of Health & Human Services (HHS) program. We've created a version for Child Support, Supplemental Nutrition Assistance Program (SNAP), and Summer Electronic Benefit Transfer (SEBT), that contains procured, preloaded base documentation for all the core questions beneficiaries have for these programs and your State-specific material can be added with ease.

- **24/7 Availability:** Priya ensures round-the-clock support, allowing customers to receive assistance at any time, which eliminates wait times and enhances overall satisfaction.
- **Advanced AI Technology:** Priya leverages generative AI to understand and respond to complex queries with human-like accuracy, reducing the dependency on live customer service representatives (CSR).
- **Cost Efficiency:** By automating routine and complicated inquiries, Priya reduces the operational load on CSRs, helping organizations save on costs while maintaining high-quality service levels.
- **Scalable and Personalized Support:** Priya adapts to the specific needs of users, providing customized interactions that improve the customer experience.

CUSTOMER SERVICE CHALLENGES

Priya addresses several significant customer service challenges:

- **Limited Resources and Budget Constraints:** Many organizations struggle with resource limitations and budget constraints, making it difficult to provide effective customer service consistently.
- **Restricted Operating Hours:** Traditional customer service operates on an 8 AM - 5 PM schedule, which may result in long wait times for inquiries and leave customers frustrated and underserved outside these hours.
- **High Volume of Inquiries:** The large number of customer inquiries can overwhelm staff, leading to errors and decreased customer satisfaction.
- **Inflexibility of Traditional Bots:** Traditional retrieval-based bots often rely on static databases and pre-programmed responses, which limits their ability to adapt to complex or ambiguous queries, further exacerbating customer support challenges.

CUSTOMER SERVICE SOLUTION

Priya addresses key challenges in customer service through several innovative features and integrations:

- **Cost Efficiency:** By reducing the need for CSRs and employing advanced AI for query handling, Priya helps organizations cut operational costs while maintaining high-quality service levels.
- **24/7 Availability:** Priya provides round-the-clock digital assistance, ensuring that customers can get support anytime, eliminating long wait times associated with traditional 8 AM – 5 PM business hours.
- **Enhanced Employee Support:** Priya acts as a co-pilot to CSRs and employees, streamlining workflows and helping manage both routine tasks and complex cases. This integration ensures continuous support for employees and customers alike.
- **Automation of Routine Inquiries:** Priya automates routine and repetitive inquiries, which minimizes the workload on CSRs. This allows staff to focus on more complex and high-priority cases.
- **Advanced AI Technology:** By leveraging generative AI, Priya can handle complex, ambiguous and vague queries with human-like understanding. This adaptability ensures accurate responses, reduces errors, and improves overall customer satisfaction.

Overall, Priya bridges the gap created by limited resources, traditional operating hours, and the high volume of inquiries by offering a scalable, adaptable, and cost-effective solution.

GENERATIVE AI DIGITAL ASSISTANT ON BRING YOUR OWN DATA

Priya employs advanced technologies to seamlessly integrate and access data, ensuring that the responses provided are both accurate and relevant.

- **Programs Served:** Current government programs we support include Child Support , SNAP, and SEBT. We can easily partner with any HHS program and build a Priya following customer requirements.
- **Bring Your Own Data (BYOD) Integration:** Organization-specific documents can be uploaded using the Administrative Application into Azure's cloud storage. Once these documents are indexed by Azure Cognitive Search, Priya can generate responses based on this data, ensuring they are pertinent to the organization's specific needs. By using BYOD, Priya mitigates the risks associated with AI hallucinations, as it relies on real and verified data for its responses.
- **Scalability and Accessibility:** Priya can be embedded as a link on websites, as a pop-up feature, or stand-alone website. This makes Priya highly accessible to users across various platforms.
- **Continuous Improvement and Evaluation:** Priya is rigorously and continuously tested on the latest language models and versions to assess quality, speed, and cost efficiency. This ongoing evaluation allows us to provide a high-quality service, optimize performance, and reduce technology costs, and ensuring we never remain stagnant in a rapidly evolving technological landscape.

- **Enhanced Customer Experience:** Priya's ability to offer accurate, relevant, and empathetic responses enhances the overall customer service experience, making users feel understood and valued.
- **Operational Efficiency:** By handling routine inquiries and reducing the burden on CSRs, Priya increases the operational efficiency of customer service departments.
- **Cost-Effective Solution:** Utilizing online data and BYOD reduces the need for extensive in-house knowledge management systems, offering a cost-effective means to provide comprehensive support.

At YoungWilliams, we designed Priya with flexibility and customization at its core, allowing it to seamlessly fit into different contexts, whether it's to provide quick and accurate answers to external customers, enhance customer service, or streamline and assist with internal processes.

ADMINISTRATIVE APPLICATION

The administrative application for Priya is a crucial component that streamlines its management and configuration. This application allows administrators to efficiently oversee and update Priya's settings, ensuring it operates optimally and remains aligned with the organization's needs.

- **Customization and Flexibility:** Administrators can customize Priya's functionality to better meet specific organizational needs and user expectations. This includes updating the index (uploading new documents), configuring its responses, managing FAQs, updating prompts, and adjusting the context of questions Priya can handle.
- **Operational Efficiency:** Admin-level access helps quickly address and resolve any technical issues that may arise, thus minimizing downtime. It also supports the maintenance of an up-to-date and accurate knowledge base, which is essential for providing reliable information to users.
- **User Experience Enhancement:** By continually refining and optimizing Priya's configurations, administrators can enhance the user experience, ensuring interactions are seamless, accurate, and contextually relevant.

KNOWLEDGE BASE

Priya supports users with a robust knowledge base meticulously developed and maintained by a dedicated team of experts.

The Priya Knowledge Base is the backbone of its ability to provide informative and reliable answers. The development of this knowledge base involves four fundamental stages: defining its scope, creating a comprehensive "universe of information," constructing the knowledge base itself, and ongoing maintenance of the knowledge base.

SCOPE OF THE KNOWLEDGE BASE

In collaboration with our clients, the scope of the Priya Knowledge Base is clearly outlined. This includes defining the specific use case(s) for Priya, identifying the target audience, and determining the team members and roles from both YoungWilliams and client teams involved in the project.

UNIVERSE OF INFORMATION

The knowledge base development begins with compiling a comprehensive list of necessary documents and data, known as the universe of information. This includes identifying specific document sources, tables, websites, manuals, and other resources essential for Priya's functionality.

KNOWLEDGE BASE DEVELOPMENT

Using the approved universe of information, our Training Development Team builds the knowledge base. This iterative process involves collaboration with Subject Matter Experts to refine the index and supplementary information until final approval. Before the knowledge base is finalized, we create a written testing plan.

ONGOING MAINTENANCE OF THE KNOWLEDGE BASE

The Priya Knowledge Base remains adaptable to changes and enhancements over time. Every modification goes through a structured approval process before implementation to ensure accuracy and comprehensiveness. Our commitment to reliability and safety means Priya is designed to consistently provide accurate and helpful responses while adhering to ethical guidelines. This maintenance includes tasks such as:

- Ensuring information is up to date and accurate by incorporating any changes in policies, procedures, and criteria.
- Adding new FAQs and resources to address common queries and provide updated assistance to users.
- Monitoring and responding to user feedback and questions to improve the user experience and information provided.

REPORTING & ANALYTICS

In the dynamic landscape of digital customer service, understanding performance and outcomes is paramount. Priya captures robust data used in Microsoft Power BI to report data for the organization to gain valuable insights into Priya's performance and the overall impact. We designed Priya's reporting and analytics capabilities to provide comprehensive, actionable data. This enables organizations to make data-driven decisions, optimize performance, and enhance the customer service experience.

CORE REPORTING COMPONENTS

- **Performance Metrics:** Priya tracks a wide range of performance indicators, such as response times, resolution rates, customer satisfaction scores, and the volume of inquiries handled. These metrics offer a quantitative view of the effectiveness and efficiency of Priya.
- **Insightful Dashboards:** Customizable dashboards in Power BI allow stakeholders to visualize key metrics in real-time. This visual representation aids in quickly identifying trends, patterns, and areas needing improvement.
- **Trend Analysis:** Priya's analytics platform can identify and report on emerging trends, helping organizations anticipate future demands and adapt their strategies accordingly.

This predictive capability ensures that resources are allocated efficiently, and customer needs are met proactively.

- **Quality Assurance:** Through continuous monitoring and evaluation, Priya helps maintain high service standards. Analytics can pinpoint areas where Priya's responses can be improved, leading to ongoing enhancements in performance.
- **Compliance and Accountability:** Priya adheres to ethical principles of AI usage, including transparency, reliability, and safety. The reporting tools ensure any deviations or issues are promptly identified and addressed, maintaining compliance with organizational policies and industry regulations.
- **Classifications:** Integrating classifications and sub-classifications into Priya's reporting structure provides deeper insights into user interactions, enabling us to spot trends and implement improvements. This streamlines the process of reviewing and addressing flagged instances of potentially harmful content or incorrect responses, supporting the maintenance of high service standards and driving continuous enhancement.

RESPONSIBLE AI

At the core of our AI development and deployment is a commitment to ethical, transparent, and accountable IA. Priya embodies Microsoft's Responsible AI principles, ensuring every interaction is guided by ethical considerations and a dedication to serving users with integrity.

KEY PRINCIPLES

- **Fairness:** We designed Priya to provide unbiased, consistent, and accurate information, ensuring impartial responses and preventing misinformation by relying on up-to-date facts.
- **Privacy and Security:** User privacy is paramount, and Priya operates without storing private information or soliciting sensitive data unless explicitly consented to, while protecting interactions with stringent security measures.
- **Transparency:** Priya's operations are fully transparent, with clear disclosures of its AI identity and accessible privacy policies, ensuring users are always informed about data usage.
- **Reliability and Safety:** YoungWilliams adheres to high standards of reliability and safety through rigorous testing, continuous evaluation, and extensive safeguards to ensure dependable, accurate, and safe interactions.
- **Inclusiveness:** Priya offers support to diverse user groups by understanding cultural contexts and accommodating special accessibility needs.
- **Accountability:** Accountability is key to our AI practices with clear responsibility for Priya's decisions and all modifications undergoing a structured approval process.

BUILDING GENERATIVE APPLICATIONS RESPONSIBLY

Priya signifies a major advancement in AI-driven customer support, grounded in a strong commitment to responsible AI practices that ensure effective, ethical, and transparent operation while providing consistent and reliable customer service.

- **Govern:** YoungWilliams maintains a governance plan for Priya. It is managed by dedicated teams, ensuring continuous improvement, transparent documentation of capabilities, and alignment with ethical guidelines and regulatory requirements.
- **Map:** During development, we identified key risks and mitigated those risks, focusing on maintaining accuracy to prevent misinformation and inappropriate responses, while also implementing protocols to securely handle sensitive information and protect user privacy.
- **Measure:** Each update of Priya undergoes rigorous testing and validation, with its API benchmarked to ensure quick, accurate responses and consistently high-performance standards.
- **Manage:** Dedicated teams continuously manage Priya's quality and performance by refining documentation, incorporating content filtering, adapting prompts to client needs, and implementing customizable blocklists and human quality assurance (QA) measures to prevent harmful or biased responses.

CONTENT CONTROLS

To ensure Priya operates effectively and safely, YoungWilliams implemented a series of content control measures. We designed these measures to manage the quality and appropriateness of Priya's responses, safeguard user interactions, and maintain compliance with ethical standards. In the following paragraphs, we provide more information about these controls.

CONTENT FILTERING

Content filtering is a critical component of Priya's content control system. This mechanism helps ensure the responses generated by Priya are appropriate and within the context of its expertise. Priya employs built-in OpenAI content filters to detect and prevent inappropriate or offensive language. When such content is identified, Priya delivers a message informing the user that the query cannot be processed due to content restrictions. For example:

"Sorry, but I can't assist with that due to content filtering. I'm here to provide information and help answer your questions about the SNAP program and services provided by the Department of Health and Human Services (HHS). Please rephrase your question."

BLOCKLIST

The blocklist in Priya helps maintain the integrity and professionalism of user interactions. OpenAI enables the customization of this blocklist, allowing administrators to specify certain words or phrases Priya should never respond to, use, or discuss. The current blocklist includes terms associated with violence, threats, and other harmful actions to ensure clean and safe communication.

QUALITY ASSURANCE

We conduct quality assurance (QA) reviews of Priya to ensure every interaction is efficient, accurate, and beneficial for users.

QUALITY ASSURANCE PLAN FOR PRIYA

The Priya QA Plan outlines YoungWilliams' comprehensive approach to ensuring high quality and consistent customer service through Priya. This plan forms a crucial part of our continuous quality improvement program, designed to meet internal standards and contract requirements.

- **Purpose:** The QA Plan describes YoungWilliams' overall quality management approach, sets forth our quality standards, and details the implementation strategies for these standards in the deployment of Priya. By following the QA Plan means Priya consistently delivers accurate, respectful, and efficient interactions, aligning with YoungWilliams' commitment to high-quality customer service.
- **Objective:** The objectives of the QA Plan include ensuring compliance with YoungWilliams' procedures and policies, detecting and addressing issues as swiftly as possible, and identifying training needs to improve Priya's responses.
- **Methodology:** QA activities are consistently conducted using a structured methodology where a dedicated QA team utilizes Power BI reports to obtain samples of Priya's conversations. We randomly select interactions from these samples and evaluate them using the Priya Quality Assurance Scorecard. In addition, all customer feedback that is submitted is evaluated and included in the process. We conduct initial and ongoing QA reviews to ensure optimal performance post-deployment.
- **Testing and Approval:** A written testing plan outlines the specific procedures for testing Priya. Leadership oversees these testing levels, allocates responsibilities, and sets quality standards.

PROMPT ENGINEERING

Priya employs advanced prompt engineering techniques to optimize the accuracy, relevance, and coherence of responses. Prompt engineering involves fine-tuning the way information and questions are presented to Priya, ensuring the system understands and responds in a manner that aligns with user expectations and organizational guidelines.

YoungWilliams employs enhanced prompt engineering to improve Priya's accuracy, relevance, and adaptability, handling complex queries and provide accurate responses. This approach ensures consistency and coherence in replies, aligning with organizational tone and guidelines. Additionally, it allows for customization and personalization of responses based on user history and preferences, resulting in a more user-friendly interaction that boosts customer satisfaction.

MONITORING

Priya tracks harmful subjects using Power BI. When Priya detects and blocks inappropriate or harmful content based on its content filtering system, the specific question or response is flagged and recorded in Power BI. This process includes classification and sub-classification to ensure these instances are easily identifiable and can be reviewed for quality assurance and further improvements.

STRICTNESS & TEMPERATURE SETTINGS

The strictness and temperature settings are crucial for shaping Priya's responses. By adjusting these settings, developers can customize Priya's behavior according to specific application needs. These adjustments also help tailor Priya's personality and responsiveness to meet user expectations effectively.

FEEDBACK

YoungWilliams developed a comprehensive multi-level feedback system that enables Priya to engage in continuous improvement through iterative revisions. We gather feedback at both the answer and conversation level. We carefully review all feedback by our team, and we take feedback seriously, as it helps continuously improve Priya to deliver the best possible experience.

Feedback also enhances Priya's accuracy and relevance by refining responses and improving conversation flow, which builds user trust and engagement. Finally, it sharpens Priya's emotional intelligence for more empathetic interactions while fueling ongoing learning to adapt to new information and user expectations.

AI CAUTIONS

The 'AI Cautions' button on Priya's user interface ensures transparency and reliability in AI interactions. It provides users with important cautions regarding AI responses, particularly highlighting the nature of AI-generated information and any potential limitations or uncertainties.

PRIVACY

To ensure the safety and trust of our users, Priya includes a prominently accessible privacy statement. This privacy statement indicates our commitment to maintaining the highest standards of privacy and security. The privacy statement informs users about data handling practices such as not storing personal information and only collecting necessary data with consent.

TERMS

The "Terms of Use" statement on Priya's user interface outlines rights, responsibilities, and liability limitations to protect both users and providers from disputes. This transparency clarifies Priya's capabilities and limitations, fostering trust by ensuring interactions are governed by clear and ethical terms. It also reassures users about data handling and security measures, reinforcing confidence in compliance with privacy laws.

TECHNICAL SPECIFICATIONS

This section provides an overview of the technical specifications necessary to ensure optimal performance and integration of Priya.

ARCHITECTURE

Priya harnesses Microsoft Azure AI to enhance user interaction with advanced AI capabilities, ensuring accurate and efficient responses to queries. Using natural language processing (NLP), Priya interprets user input conversationally, creating a seamless experience. Supported by Azure's infrastructure, Priya can scale to handle increasing interaction volumes without compromising performance, while also adhering to industry standards for data protection and compliance.

SECURITY MEASURES

AZURE FRONT DOOR

Priya is fortified by Azure Front Door, which utilizes advanced Web Application Firewall (WAF) technology to ensure secure and uninterrupted interactions. Operating on a global network of Microsoft data centers, it minimizes Distributed Denial of Service (DDoS) attack impacts by absorbing and redirecting malicious traffic. Intelligent traffic management prioritizes legitimate user requests while filtering out harmful ones, and the service automatically scales resources to handle sudden traffic spikes. Continuous monitoring of traffic patterns generates alerts during DDoS attacks, allowing for swift mitigation. Azure Front Door's multi-layered security approach integrates DDoS protection with other features, providing comprehensive defense against various threats.

SOC 2 Type II Certification

Priya follows stringent data security and operational protocols that align with SOC 2 Type 2 certification standards. This certification verifies Priya's system has been rigorously evaluated and consistently meets customer data protection requirements over an extended period, typically six months to a year. It focuses on five key areas: security, availability, processing integrity, confidentiality, and privacy. The certification assures users and clients of the reliability and security of Priya's operations, ensuring compliance with legal and regulatory requirements.

PROTECTING PERSONALLY IDENTIFIABLE INFORMATION

In today's digital age, the protection of Personally Identifiable Information (PII) is of paramount importance. As organizations increasingly rely on digital assistants like Priya to manage and assist with sensitive data, ensuring the security and privacy of PII becomes critical. Priya integrates seamlessly with Azure's advanced development options to ensure the highest standards of PII detection and redaction. PII redaction is only available for supported languages.

PROGRAMMING LANGUAGES, FRAMEWORKS, AND TOOLS

To explore the programming languages, frameworks, and tools that power our platform, see the following:

- Python (v3.11)
 - <https://www.python.org/downloads/release/python-3110/>
- ReactJS
 - <https://react.dev/>
- OpenAI (1.41.0)
 - <https://learn.microsoft.com/en-us/azure/ai-services/openai/overview>
- Azure Search Documents (11.6.0b4)
 - <https://learn.microsoft.com/en-us/azure/search/hybrid-search-overview>
- Azure Cosmos DB (4.5.1)
 - <https://learn.microsoft.com/en-us/azure/cosmos-db/serverless>
- Azure App Configuration (1.5.0) & Azure App Configuration Provider (1.1.0b3)
 - <https://learn.microsoft.com/en-us/azure/azure-app-configuration/overview>
- Azure Cognitive Speech Services (1.37.0)
 - <https://learn.microsoft.com/en-us/azure/ai-services/speech-service/overview>
- Azure AI Text Analytics (5.3.0) & Azure AI Translation Text (1.0.0b1)
 - <https://learn.microsoft.com/en-us/azure/synapse-analytics/machine-learning/tutorial-text-analytics-use-mmlspark>
- Azure AI Form Recognizer (4.0.0)
 - <https://learn.microsoft.com/en-us/azure/synapse-analytics/machine-learning/tutorial-text-analytics-use-mmlspark>
- Lang Chain (0.2.14)
 - <https://python.langchain.com/docs/introduction/>
- Azure Key Vault Secrets
 - <https://learn.microsoft.com/en-us/azure/key-vault/general/overview>

SUPPORTED BROWSERS & MOBILE DEVICES

Users can access Priya using:

- UThe latest version as well as two previous versions of Google Chrome, Microsoft Edge and Mozilla Firefox.
- Different mobile devices, such as Android, iPhone, and iPad.