



# Allretire

Simplifying Seniors' Lives, One Service at a Time

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# AIRETIRE: THE TEAM



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# USER STORY 1: MEET SALLY

Sally, an 82-year-old retiree living alone, needed to update her contact information with Social Security after moving in with her daughter. Previously, such tasks required her daughter to take time off work to drive her to the Social Security office.

With Alretire, Sally was able to:

1. Use high-contrast mode and larger text settings to easily read the interface.
2. Utilize voice commands to navigate the system, thanks to the text-to-speech feature.
3. Safely upload her ID for verification, with the system automatically checking image quality using Azure Vision API.
4. Complete the contact information update form with:
  - Auto-correction of common mistakes (e.g., phone number / email formatting).
  - Verification of sensitive information before submission.
  - Clear error messages in simple language.

The system guided her through each step with simple instructions and voice feedback, while automatically protecting her sensitive information. When she needed to reference official information, Alretire provided direct links to the Social Security Administration's website ([ssa.gov](http://ssa.gov)) and warned her about suspicious links.

Thanks to Alretire, Sally updated her information in minutes—**no stress, no office visits.**



## USER STORY 2: MEET ABDUL

Abdul, a 71-year-old retiree, received notification that his benefits were suspended due to an incorrect death report. Instead of facing long phone queues and office visits, Alretire helped him initiate the verification process online.

Using Alretire, Abdul could:

1. Complete an identity verification form with:

- Secure document upload for his ID.
- Automatic quality checking of uploaded documents using Azure Document Intelligence.
- PII protection for sensitive information.

2. Access a step-by-step guide for resolving identity issues, with:

- Direct links to official SSA resources.
- Clear instructions in plain language.
- Voice readout of important information.

3. Save his progress and documentation securely for future reference.

Thanks to Alretire, Abdul resolved his issue quickly and securely—no bureaucracy, no frustration.

# PROJECT GOALS

- 
- 1. Create a secure and accessible platform for senior services and personal management.**
  - 2. Implement comprehensive prompt validation and correction**
  - 3. Ensure responsible AI practices and ethical handling of sensitive data.**
  - 4. Provide multi-modal interaction (text, voice, form-filling)**



# SOLUTION COMPONENTS

## 1) Core Features

- Intelligent Input Processing
- Grammar and spelling correction
- Context-aware term optimization
- Multi-language support

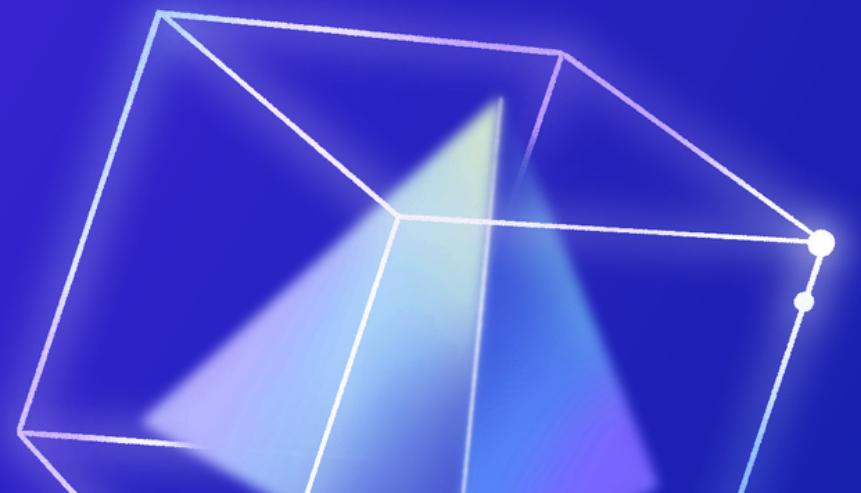
## 2) Safety & Security

- PII detection and redaction
- Harmful content filtering
- Ethical language validation

## 3) Accessibility

- Voice input/output
- Adjustable text size
- High contrast mode
- Clear error messaging

Detailed information is available in the README.md file in the repository on GitHub



# OUR APPROACH



Streamlit



## STREAMLIT & PYTHON

- **Frontend:** Streamlit for building the user interface.
- **Backend:** Python for application logic and data processing.



## AZURE

- **Azure Computer Vision** analyzes and processes images for quality and integrity, including document uploads.
- **Azure Speech Services** facilitates natural voice interaction through advanced text-to-speech capabilities.
- **Azure Text Analytics** extracts insights via entity recognition and PII detection, safeguarding user privacy.
- **Azure Content Safety API** offers real-time validation, ensuring compliance by screening user inputs for harmful content.
- **Azure Document Intelligence** efficiently processes structured data from diverse document types for streamlined handling.



## GEMINI

- **Google Gemini** for advanced AI tasks using its Gemini-1.5-Pro model.
- Also, a custom LanguageTool Library to enhance input clarity with precise grammar corrections.

# AIRETIRE DEMO



# Airetire



Simplifying Life, One Service at a Time.

[Login](#)   [Dashboard](#)   [Forms](#)   [AI Assistant](#)

## Account Verification

To login, please upload a clear photo of your Account ID for verification.

Upload Account ID

Drag and drop file here  
Limit 200MB per file • JPG, PNG, JPEG

Browse files

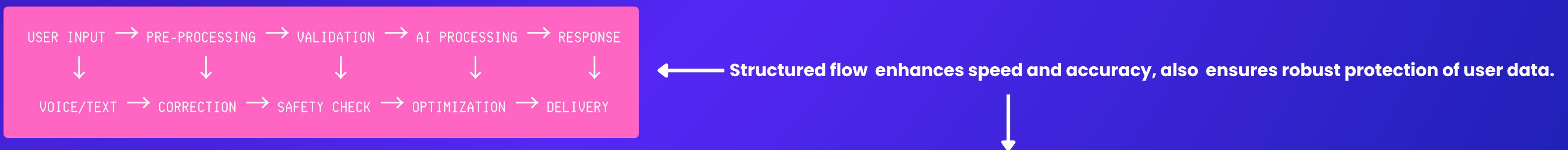


# KEY LEARNINGS

## Technical Insights

- **Pre-processing user inputs through multiple validation stages is crucial.**
  - Reduces accidental exposure of sensitive data and Ensures accurate AI responses.
- **Unique validation for different data types:**
  - Improved accuracy for structured(forms) and unstructured (audio) inputs.
- **Leveraging Azure services:**
  - Provides robust security without complex custom development, enabling rapid implementation of advanced validation features.

**Input Processing Pipeline Diagram**



[Raw Input] --> [Grammar Check] --> [PII Detection] --> [Context Optimization]--> [Safety Filter]-->[AI Response] --> [Accessibility Formatting]

# KEY LEARNINGS

## User Experience (UX Design)

- **Simplicity and Clarity:** Designing for seniors ensures an intuitive interface that is easy to navigate.
- **Informed Design Choices:** Research on senior needs helps anticipate common challenges and guides effective design decisions.
- **Accessibility features are critical:** Implementing high-contrast modes and text-to-speech capabilities ensures effective interaction for all users.

## Security & Ethics

- **Proactive PII Detection:** Identifying and redacting personally identifiable information (PII) is crucial for protecting user privacy, building trust, and ensuring compliance.
- **Contextual Ethical Language Validation:** Understanding that asking for information about an SSN is not the same as sharing one is essential for ethical interactions.
- **Balance Between Security and Usability:** Strive to create a user-friendly experience while maintaining robust security measures.

# NEXT STEPS



## USER TESTING AND FEEDBACK

- Engage senior users for testing to gather insights on usability and accessibility.
- Refine the application based on feedback to enhance user experience.

## ENHANCE SECURITY FEATURES

- Implement two-factor authentication (2FA) for improved data protection.
- Conduct regular security audits to identify vulnerabilities and ensure compliance.

## EXPAND AZURE SERVICES UTILIZATION

- Leverage additional Azure services like Bot Services for interactivity and Machine Learning for personalized experiences.
- Optimize Azure usage to maintain financial sustainability as the application scales.

## FEATURE EXPANSION

- Add features based on user feedback, for example, appointment scheduling.
- Explore partnerships with healthcare providers for additional services.

# THANK YOU!

