Crafting Intuitive Conversations

CREATING AN AI-POWERED Maintenance Assitant

Over the past 2.5 years, I've been an integral part of the UX writing and conversation design team developing "Dex," an AI-powered conversational assistant that helps residents troubleshoot and report home maintenance issues.

This case study outlines my approach to developing intelligent conversation flows ("intelliflows") that diagnose problems, guide users through DIY solutions, and collect precise information when professional service is needed.

Building Dex

As a Conversation Designer focused on UX writing and flowchart development, I:

Researched

user pain points and maintenance journeys to understand how residents describe problems and what solutions they expect.

Developed

a conversational style guide establishing a friendly, accessible tone.

Crafted

clear, concise scripts at a 6th-grade reading level to ensure accessibility for all users.

Wrote

easy-to-follow step-by-step DIY instructions that empowered users to solve problems independently.

Created

diagnostic question sequences that efficiently identified maintenance issues.

Collaborated

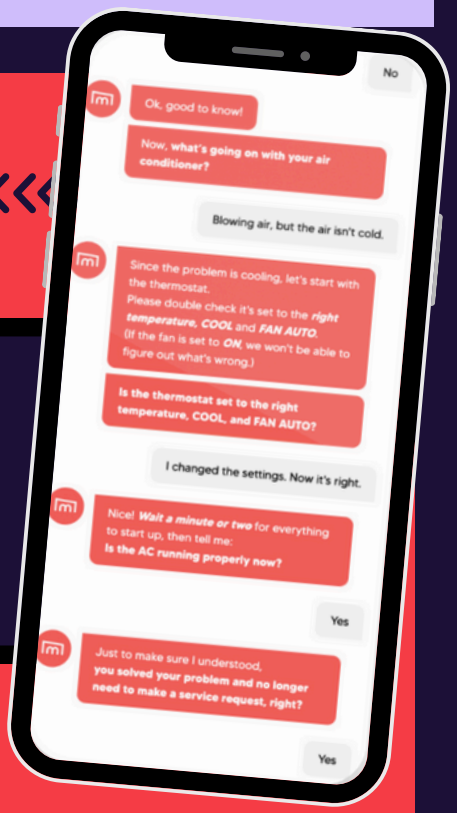
with subject matter experts to ensure technical accuracy while avoiding jargon.

VOICEFLOW EXPERTISE AND INNOVATION

I developed significant expertise in Voiceflow, including:

Advanced Skip Logic Implementation	Created sophisticated branching paths based on user context.
Canvas Organization Strategies	Developing visual frameworks for complex diagnostic flows.
Variable Management	Using variables to track user inputs and customize responses.
Modular Component Design	Building reusable blocks for common interactions.

CASE STUDY: THE AC INTELLIFLOW TRANSFORMATION



1. Research Phase

I began by analyzing service request data, discovering that:

- AC issues represented a significant portion of maintenance requests.
- Three symptoms (not cooling, not turning on, and leaking) accounted for the most reports.
- Users frequently abandoned the previous flow when technical and/or irrelevant questions were asked early in the conversation.

2. UX Writing Innovations

Based on this research, I:

- Restructured the initial question to address the most common concern: "Is your AC blowing cold air?"
- Simplified technical terminology throughout the flow
- Developed clear filter-change instructions with variations for different filter types.
- Created descriptive diagnostic language that helped technicians quickly identify issues.

3. Flowchart Development

Building these conversational flows required designs that accounted for:

- Parallel conversation paths for different AC types (central, window, wall).
- Conditional branching logic based on symptoms and user capabilities.
- Seamless DIY integration with fallbacks when solutions weren't successful.
- Emergency detection patterns that identified potentially dangerous situations.

DIY INSTRUCTION DEVELOPMENT

I crafted step-by-step instructions for 30+ self-service maintenance tasks and mitigations, including:

- Unclogging sinks
- Adjusting toilet flappers
- Replacing lightbulbs
- Containing leaks
- Checking and changing AC filters
- Breaker resets
- Thermostat adjustments
- Adjusting garage door sensors

Each instruction set followed my custom-developed framework:

1. Set expectations for difficulty and time required
2. List required tools or materials
3. Provide step-by-step guidance with confirmation points
4. Offer troubleshooting advice for common issues
5. Create clear success/failure paths

RESULTS AND IMPACT

My UX writing and flowchart development contributions helped achieve the following:

- Improved completion rates through more engaging, natural conversation.
- Decrease in overall service requests due to resident self-solves using effective DIY instructions.
- Enhanced diagnoses for maintenance dispatch and technicians.
- Consistent user experiences across all maintenance items and symptoms.
- Successful platform migration from Dialogflow to Voiceflow.

CONCLUSION

My work building Dex demonstrates my ability to research user needs, craft effective UX writing, and build sophisticated conversation flows in Voiceflow. By combining user-centered writing principles with technical expertise, I created intuitive conversation experiences that significantly improved the maintenance reporting process for both users and service providers.