



AI AgeWell Challenge – Student Project Guide

Turning Ideas into Real-World Solutions for Aging Well

Register to the event here: <https://forms.office.com/r/aCk33K7W2h>

Submit your project here: <https://airtable.com/appKS1c2ycFGIbnHh/pagBKqbE2sUXJXUNL/form>

1. Purpose of This Guide

This document helps you:

- Understand the types of problems you can solve
- Choose a meaningful project idea
- Design a solution using AI and technology
- Align your project with real-world impact

All project ideas are sourced from community needs and focus on improving the quality of life for older adults.

2. Key Themes You Can Explore

When choosing a project, consider focusing on one of these high-impact areas:

Health & Wellness

- Medication adherence
- Hydration monitoring
- Sleep tracking

- Chronic disease detection

Independent Living

- Smart home safety
- Fall prevention
- Daily routine monitoring
- Food and nutrition support

Mental Health & Social Connection

- Loneliness reduction
- AI companions
- Emotional monitoring
- Cognitive support tools

Safety & Emergency Response

- Fall detection
 - SOS systems
 - Predictive risk alerts
 - Emergency response tools
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3. How to Choose a Strong Project Idea

Use this simple framework:

Step 1: Identify the Problem

- What challenge does your solution address?
- Why is this important for older adults?

 Example: Seniors forget medication or take incorrect doses

Step 2: Define the Solution

- What are you building?
- How does it solve the problem?

 Example: A wearable ring that tracks medication usage

Step 3: Add the AI Component

- Where does AI improve your solution?
- What data will it use?

👉 Example: AI tracks patterns and sends alerts to caregivers

Step 4: Highlight Impact

- Who benefits?
- What changes?

👉 Example: Reduced hospital visits and improved safety

4. Example Project Breakdown

Smart Pill Bottle Detection Ring

- **Problem:** Medication errors
 - **Solution:** Smart ring + tagged bottles
 - **AI Component:** Tracks adherence patterns
 - **Impact:** Prevents missed or double doses
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AI Physical Companion Device

- **Problem:** Loneliness and daily assistance needs
 - **Solution:** AI-powered companion device
 - **AI Component:** Conversational AI + reminders
 - **Impact:** Improves mental health and independence
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Smart Hydration Bottle

- **Problem:** Dehydration in older adults
- **Solution:** Smart bottle with sensors
- **AI Component:** Tracks hydration habits

- **Impact:** Promotes better health outcomes
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5. What Makes a Winning Project

Judges will look for:

Innovation

- Is the idea creative or forward-thinking?

Feasibility

- Can this realistically be built or tested?

AI Integration

- Is AI meaningfully used (not just added)?

Real-World Impact

- Does it solve a real problem?

Adoption Potential

- Would seniors or caregivers actually use it?
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6. Project Output Expectations

Your team should be able to present:

- Problem statement
 - Proposed solution
 - How AI is used
 - Target users
 - Demo / prototype / mockup (optional but encouraged)
 - Impact and future potential
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7. Tips for Success

- Start simple → then enhance with AI
 - Focus on usability for older adults
 - Think about caregivers and family
 - Use existing tools (don't build everything from scratch)
 - Test your idea with real people if possible
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8. Where to Find Ideas

👉 Full project list available online

👉 You may also:

- Build on an existing idea
 - Combine multiple ideas
 - Propose your own (must align with aging well)
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9. Get Started

- Form your team
- Select your idea
- Register for the challenge
- Start building!