Memo

To: Professor Emelia Hughes

From: Divine Uwera

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Subject: Implementation & Ethics Memo for Uni-Nest, AI-Powered Housing Support for International Students

Highlights

- How I Used AI While Building Uni-Nest
- Why the AI Feature Looks the Way It Does
- Risks, Trade-offs, and Integrity Considerations
- What I Learned About Building with GenAI

How I Used AI While Building Uni-Nest

Throughout the development of Uni-Nest, Google AI Studio served as my primary partner for ideation, debugging, and shaping the overall user experience. I used AI to draft interface copy, explore tone and personality, and test multiple design approaches before selecting the clearest and most student-friendly versions. For example, the homepage language, the three-step journey ("Find Your Crew / Discover Your Home / Secure Your Lease"), and much of the explanatory copy in the lease application began as AI-generated drafts that I refined extensively.

AI assisted with coding challenges, particularly when React components did not behave as expected. For elements like the roommate matching cards, profile strength meter, or the multi-step form logic, AI helped me understand why certain states weren't updating or why a component re-rendered incorrectly. However, AI never replaced engineering judgment. Most generated snippets required modification, and some introduced new issues. I learned to treat AI's suggestions as starting points, not solutions.

Human editing was especially crucial when building Uni-Assistant, the platform's AI feature. Early outputs were unhelpfully procedural, telling users how to navigate the

interface rather than giving direct answers. I iterated repeatedly,adjusting the system prompt, refining constraints, and rewriting guidelines,so that Uni-Assistant would communicate clearly, confidently, and in language that reassures international students. This balance between AI assistance and human intentionality was essential to achieving the experience I envisioned.

Why the AI Feature Looks the Way It Does

The design of Uni-Assistant is rooted in the real needs of international students. Many experience uncertainty, fear of scams, and difficulty understanding local housing systems. Rather than overwhelm them with technical tools, I designed a simple conversational assistant that offers immediate clarity in plain, friendly language.

Its appearance,clean layout, quick prompts, and structured responses,mirrors the role it is meant to play: a calm guide who can answer questions like “What houses are near the University of Notre Dame?” or “What scams should I avoid?” without requiring users to navigate multiple tabs or understand complex filtering systems.

I also intentionally limited the feature set. While more advanced AI capabilities were technically possible, they posed risks around privacy, hallucination, or over-reliance. By keeping the assistant’s scope focused,explaining listings, describing safety factors, and supporting the lease process,I ensured that the AI reinforces Uni-Nest’s core promise: to make housing simpler, safer, and less overwhelming.

Risks, Trade-offs, and Integrity Considerations

Building an AI-supported housing platform required careful decisions about privacy, fairness, and responsible use. To protect student privacy, Uni-Assistant does not process sensitive documents such as passports or proof of funds; these remain within the structured form components of the platform. AI only uses data students explicitly choose to provide.

To preserve fairness, the roommate matching system draws exclusively from lifestyle preferences,sleep schedule, cleanliness, social habits,and avoids inferring personal traits or cultural assumptions. Housing recommendations rely on neutral criteria like commute distance, safety indicators, and verified listing status.

I also considered the risks of over-reliance on AI. Uni-Assistant does not attempt legal or immigration interpretation, and it prompts users to verify critical details with landlords or university offices. This boundary protects students from misinformation and keeps expectations realistic.

In terms of academic integrity, I used AI as a tool,not a substitute. It supported brainstorming, debugging, and draft generation, but I made every architectural decision

and wrote or rewrote all final code and copy. These limits ensured both the safety of the product and the honesty of my work.

What I Learned About Building with GenAI

One practical challenge I faced was how unpredictable AI can be when working with front-end code. When I asked AI to help resize or reposition images across different device types, it often suggested CSS changes that broke responsiveness or distorted layouts. These issues taught me that AI can speed up exploration, but it does not always understand nuance,especially in UI work.

If I were offering advice to another founder, I would emphasize that AI accelerates the wrong idea as quickly as the right one. Without a clear vision, the tool produces variations that distract more than they help. When the vision is sharp, however, AI becomes a powerful creative amplifier.

This project also changed how I think about my own capstone work. Before building Uni-Nest, I had ideas about creating a platform, but I lacked certainty about how to begin. This project gave me the confidence that I can design and build a functional system.

Sincerely,

Divine Uwera

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