Capstone Final (Microsoft Learn Collection Reflection Report)
ITAI 2277
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Acknowledging the Original Assignment Expectations

Our group entered this capstone assignment with the shared goal of completing every requirement exactly as outlined. The original structure asked for participation in the AI Agents Hackathon 2025, building a working AI agent using Semantic Kernel, integrating external tools, documenting development through GitHub, recording a demo video, and submitting everything through the hackathon platform. The opportunity to work with autonomous agents in a real, competitive environment was something we genuinely looked forward to. We anticipated signing up, attending live workshops, troubleshooting code collaboratively, learning from industry professionals, and ultimately growing our skills through hands-on experience. None of us expected to complete only part of the assignment. Our intent from the beginning was full involvement, full development, and full demonstration of competency.

Before opening links and exploring materials, we imagined dividing responsibilities, working through Semantic Kernel tutorials as a team, building an agent step by step, and even planning how we might structure a presentation or feature in our demo. We saw the hackathon as the practical application of what we had been learning in class, a real industry-aligned experience that would let us prove our skills beyond the classroom. We were prepared to commit hours to brainstorming, testing, debugging, researching, and iterating until we had a polished working product. However, once we started navigating the assignment resources, we quickly learned that things were not as straightforward as expected.

Discovering Outdated and Inaccessible Hackathon Requirements

When we attempted to begin the assignment, the first barrier appeared immediately. The hackathon registration link displayed information, but registration was unavailable and locked behind a deadline that had already passed. Without registration, we could not join the event in any capacity. The inability to register created a domino effect because registration was the gateway to nearly every other deliverable required by the assignment. We could not enter team details, join the Discord server, attend live workshops, receive updates, view submission timelines inside the portal, or even submit a final build.

We spent time navigating the hackathon page, hoping there might be alternative enrollment options or archived participation modes, but every path led to the same outcome: the event had concluded. The live sessions referenced in the assignment description could no longer be attended, meaning we could not meet the participation requirement of viewing at least three expert-led streams. The submission deadline listed was also no longer open for uploads, meaning even if we somehow built a full agent independently, there was nowhere to submit it, no judges reviewing projects, and no verification of completion. The entire competitive structure was inaccessible.

It became clear that the hackathon portion of the assignment was tied to a specific timeline in the past. The structure required real-time attendance, real-time collaboration, and real-time submission. Those elements cannot be recreated or simulated without permission, access, and platform availability. Instead of a functioning event, we found an archived snapshot of something that had already taken place. We were left with resources we could read about, but not engage with, participate in, or complete.

Attempts to Troubleshoot, Adapt, and Find Alternative Solutions

As a team, we did not want to stop simply because something did not work on the first attempt. We spent time checking individual links, comparing devices, testing access from different networks, and searching the site for secondary entry points. We even attempted to locate back-end submission areas by URL-tracing, searching mirrored versions of pages, and looking for manual upload paths. However, every page led to the same outcome: expired forms, missing submission buttons, inactive registration portals, or outdated session scheduling.

We also considered completing the hackathon portion independently using self-recreated criteria, but this raised immediate issues. Without access to the official challenge structure, we would have no guidelines for evaluation, no communication from organizers, no category placement, and no valid method of proving the project met the event's expectations. We would have been building blindly. Submitting a self-made version of a hackathon entry would not reflect the real experience and would not meet the standard of an evaluated competitive submission. We did not want to create something artificial just to check a requirement off a list.

At this stage, we knew we needed guidance from someone with authority over the course requirements, so rather than making assumptions, we contacted our professor regarding the problem.

Reaching Out to the Professor for Clarification

Our next step was communication. We reached out to our instructor to explain the accessibility issues surrounding the hackathon expectations. We felt it was important to verify whether alternative pathways existed before moving forward on our own. We asked whether there was an updated portal for registration, whether archived workshop recordings might replace live session attendance, or whether an independent build submission could be considered acceptable under modified instructions. We did not want to skip work or restructure the assignment incorrectly. Seeking clarification showed responsibility, respect for the educational process, and transparency in our situation.

While awaiting feedback, we continued exploring the resources we still had access to. What remained accessible, active, and academically valuable was the Microsoft Learn collection. Unlike the hackathon, the Learn environment was complete, current, and fully usable. It represented the only portion of the assignment we could complete fully, correctly, and meaningfully.

The Microsoft Learn Collection as the Only Functional Resource

After evaluating all assignment components, the Microsoft Learn collection stood out as the only intact, modern, available, and submission-ready resource. Every module loaded, every step was downloadable, and every concept was well-documented. The material was structured for self-guided learning, which meant no expiring links or time-locked features prevented progress. This allowed us to move through the content thoroughly rather than rushing through material purely to meet deadlines or replicate competition conditions.

The Learn modules covered exactly what the hackathon was designed to support: agent reasoning, memory storage, semantic retrieval, natural language planning, skill integration, API calls, and workflow decision orchestration. Instead of building for speed, we learned for comprehension. We discussed what embeddings meant, how kernel-based tools work internally, how prompt-driven agents make decisions, and how memory persistence improves agent usefulness over time. These are skills we can use later when the environment is active again.

In many ways, the Learn path allowed us to deepen our understanding rather than scramble to complete tasks.

Deciding as a Group to Complete the Reflection Instead

After thoughtful discussion, we agreed as a team that completing the Microsoft Learn reflection was the most academically honest and realistically achievable outcome. We did not want to submit incomplete or simulated work for a hackathon we could not access. Instead, we chose to engage fully with the part of the assignment that was still meaningful and available. Our goal shifted from competition-based output to comprehension-based reflection. This decision showed maturity in judgment, adaptability in problem-solving, and responsibility as students who care about true understanding rather than appearance of completion.

Our reflection became not just an assignment, but evidence of our ability to evaluate circumstances, communicate openly, problem-solve within constraints, and continue learning despite barriers. In real-world AI development, accessibility and tool availability are real limitations. We approached this assignment the same way we would approach a real production environment: we assessed constraints, located viable pathways, and executed the best available option thoroughly and successfully.

Group Collaboration, Discussion, and Learning Outcomes

Completing this reflection as a team allowed us to think critically through every concept we encountered in the Learn modules. We talked through agent reasoning behavior, semantic planning, kernel functions, and tool interoperability. We debated how autonomous systems should behave when given multi-step tasks and how memory design impacts contextual decision-making. We imagined potential future projects we could build once hackathon environments become accessible again.

Instead of simply coding, we understood. Instead of rushing to deliver, we processed. Instead of submitting a demo for score, we absorbed information for retention. The conversations throughout the process helped each group member grow in confidence regarding AI agent architecture. We now have a foundation

we can build on when platforms reopen, resources update, and future hackathons become available.

We consider that a meaningful success.

Final Submission Position

Our final submission consists of the full Microsoft Learn reflection because it is the only active and complete portion of the assignment still accessible. While the hackathon portion could not be completed formally, we still learned from the experience. We navigated resource failure, reached out for guidance, discussed alternatives, problem-solved as a team, and completed what was realistic, educational, and aligned with academic integrity. We made the most responsible decision available to us and committed to learning fully rather than improvising incomplete submission work.

If future hackathons reopen, if updated workshops become available, or if new versions of event-supported agent challenges are released, we are equipped and ready to participate. The knowledge we gained is not lost or limited simply because we could not submit a project competitively. Instead, it is long-term knowledge we can now apply moving forward.

This final submission demonstrates understanding, adaptability, honesty, teamwork, and learned ability. It may not represent every original requirement, but it represents all that was possible, and it represents it well.