Dear Hiring Manager,

I am writing to express my enthusiastic interest in the Graduate Engineer position within the Industrus Engineering Graduate Program, as advertised. As a final-year Bachelor of Engineering (Honours) student majoring in Software Engineering at the University of Technology Sydney (UTS), I have cultivated strong technical foundations in secure AI systems, deep reinforcement learning, and collaborative software development. Through rigorous academic training, hands-on research in trustworthy artificial intelligence, and cross-cultural teamwork in project-based subjects, I am confident in my ability to participate in your Graduate Program and contribute meaningfully to your innovative and ethically grounded engineering environment. Below, I address each of the six selection criteria using specific examples from my academic and research experiences.

---

1. A commitment to ethical conduct and the highest standards of professional accountability

Situation:

During my ongoing research with the Deep Learning Sec. With Apps. Griffith & UTS Joint Research Group which is focusing on trustworthy artificial intelligence, I encountered a critical ethical dilemma while evaluating a model's vulnerability. A collaborator proposed modifying experimental data to exaggerate the efficacy of a newly developed defense mechanism to accelerate publication.

Task:

As a junior researcher, I was responsible for ensuring the integrity of our experimental pipeline and results, while also navigating the pressure to produce "publishable" findings.

Actions:

I respectfully voiced my concerns during our weekly meeting, citing IEEE and ACM ethical guidelines on data integrity and reproducibility in AI research. I proposed an alternative: transparently documenting both successful and failed defense scenarios, and submitting our work to a reproducibility-focused workshop (such as ICML Reproducibility Challenge) rather than inflating results for a high-impact venue.

Result:

My supervisor endorsed this approach, and our team revised the experimental design to include comprehensive failure analysis. This not only upheld scientific integrity but also strengthened the credibility of our work. The experience reinforced my belief that ethical accountability is non-negotiable in engineering—especially in high-stakes domains like AI security—where compromised models could endanger real-world systems.

2. Demonstrated ability to effectively communicate both with other engineers and with stakeholders from different fields

Situation:

In the Software Innovation Studio course at UTS, I collaborated with a multicultural team—including students from civil, mechanical, and software engineering backgrounds—to develop a prototype web application for generating personalized travel plans by AI.

Task:

As the lead software developer, I needed to translate complex technical constraints (e.g., data privacy, API rate limits) into accessible language for non-software teammates and ensure alignment on project scope.

Actions:

I initiated weekly stand-ups using Miro boards to map user stories visually and created a shared glossary of technical terms. When disagreements arose over feature feasibility, I facilitated a prioritization session using MoSCoW analysis (Must-have, Should-have, Could-have, Won't-have). I also prepared simplified architecture diagrams to explain our data flow to partners unfamiliar with OpenAI and React APIs.

Result:

The team delivered a fully functional MVP on schedule, which received positive feedback from our academic assessors. More importantly, this experience taught me that effective communication isn't about simplifying ideas—it's about building shared understanding across disciplines, a skill I am eager to apply when interfacing with clients, policymakers, or multidisciplinary teams at Industrus.

---

3. The ability to engage with a creative, innovative and proactive environment

Situation:

While reviewing literature on backdoor attacks in deep reinforcement learning, I noticed a gap: most defenses assumed there's only one effective trigger needs to be detected, whereas real-world adversaries might use multiple, distributed triggers.

Task:

I was tasked with contributing to our group's research direction but wanted to propose an original angle beyond replicating existing methods.

Actions:

I independently prototyped a dynamic trigger simulation framework in PyTorch, modeling adversaries that adjust trigger patterns and numbers based on environmental states. I then presented this idea to our research group, supported by preliminary results showing a 40% drop in detection rates under distributed triggers compared to single ones.

Result:

The team adopted my framework as a new evaluation benchmark for all future defense proposals. This proactive contribution not only advanced our project's novelty but also led to

my inclusion as a co-author on our upcoming paper. I thrive in environments that reward curiosity and initiative—qualities I see reflected in Industrus's work on cutting-edge projects like renewable energy storage and disaster-resilient infrastructure.

---

4. Demonstrated ability to use and manage information

Situation:

As part of my peer-review duties for conferences like AAAI and ICICS 2025, I evaluated 5 technical submissions on adversarial machine learning, each containing complex experimental setups, datasets, and claims.

Task:

I needed to systematically assess the validity, reproducibility, and novelty of each paper while synthesizing feedback for authors and senior reviewers.

Actions:

I developed a structured review template that categorized evaluations into: (1) theoretical soundness, (2) experimental rigor, (3) data transparency, and (4) real-world relevance. For one submission, I cross-referenced cited datasets with public repositories and identified a mismatch in preprocessing steps that invalidated their baseline comparison.

Result:

My reviews were commended by senior reviewers for their depth and clarity. This experience honed my ability to manage, critically evaluate, and ethically utilize technical information—skills directly transferable to engineering consultancy, where accurate data interpretation underpins client recommendations and system designs.

---

5. The ability to manage your own performance in a professional environment

Situation:

In my first months as a researcher, I struggled with time management—juggling honours coursework, lab responsibilities, and conference review deadlines—leading to missed internal milestones.

Task:

I recognized that without better self-regulation, I would underperform both academically and professionally.

Actions:

I adopted a dual-tracking system: (1) a Notion dashboard integrating UTS Canvas deadlines, research tasks, and review commitments, and (2) a weekly self-reflection log based on the Ullman Reflection Model (which I've used in prior coursework). I also scheduled biweekly check-ins with my supervisor to calibrate expectations.

Result:

Within two months, I not only caught up on delays but began submitting review reports ahead of schedule. My grade average rose to 86.00%, and I received an invitation to mentor incoming

research students. This journey taught me that professional growth requires proactive self-assessment and adaptive planning—habits I will bring to Industrus's structured yet dynamic graduate program.

---

6. A demonstrated ability to work as part of a team and to show leadership when required

Situation:

During the Software Innovation Studio project, team morale dipped midway due to unclear roles and conflicting visions for the product's technical stack.

Task:

Although not officially the team leader, I sensed that without intervention, the project would fragment.

Actions:

I organized an emergency retro session using the "Start, Stop, Continue" framework. I then volunteered to coordinate backend development and proposed using GitFlow for version control to reduce merge conflicts. To foster inclusion, I rotated documentation duties weekly so all members contributed to technical writing.

Result:

Team cohesion improved significantly, and our final demo was among the top three in the cohort. While I initially hesitated to step up—reflecting my earlier tendency toward conservatism in group settings—I learned that leadership isn't about authority; it's about service and initiative. I am now eager to contribute as both a collaborative team member and an emergent leader within Industrus's project rotations.

If you would like to discuss my application further, please feel free to contact me via email at leedontip@gmail.com. I look forward to the opportunity to contribute to Industrus Engineering's mission of reimagining engineering through innovation, integrity, and impact. My resume and academic portfolio are attached for your review.

Regards,
Dongting Li