AI TOOLS

Improving Efficiency, Sacrificing Real-World Readiness?

NAME OF PROJECT:
English Project

PRESENTED BY:
Muhammad Dwiky Yanuarezza

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01 Does AI boost productivity or severely damage fundamental problem-solving skills?

02 Thesis: AI efficiency risks creating graduates ill-prepared for real-world complexity and security demands.

03 We will explore the trade-offs between speed and foundational mastery in IT education.
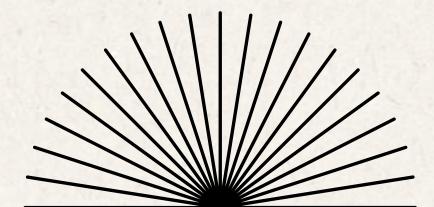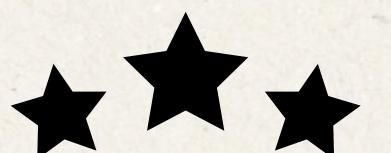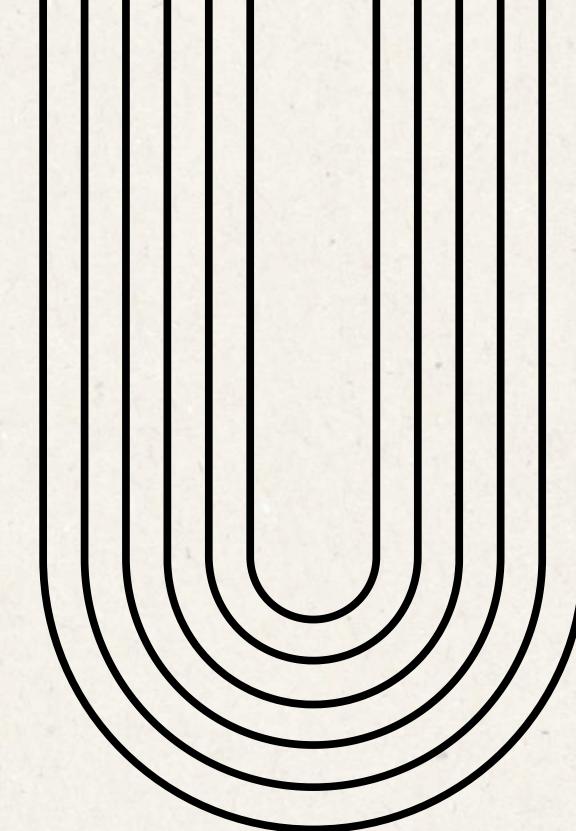
The AI Dilemma in IT Education

AI tools (Copilot, Gemini, ChatGPT) are now widely accessible for code and instant solutions.
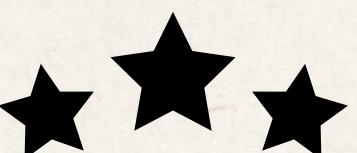
The Efficiency Advantage

Short-Term Gains: Acceleration and Access
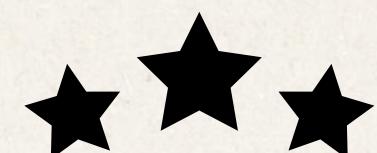
Velocity

Rapidly generates boilerplate code and basic functions. (Saves hours on repetitive tasks.)

Lower Barrier

Provides instant explanations for errors (Git logs, syntax), reducing beginner frustration.

Broad Exploration

Allows students to prototype and explore complex frameworks faster than ever before.

The Cost of Over-Reliance

Risks: Erosion of Core Skills

Logic Decay
Students skip the deep algorithmic and logical thinking needed to understand system structure.

Debugging Gap
Lack of manual troubleshooting experience when AI fails in complex, production-specific environments.

Ignoring Documentation
Over reliance leads to "blind trust" in AI answers instead of verified official sources.

The Reality of
Workplace Challenges

The Unpredictable Real World

Security Oversights

AI often omits critical security features (hashing, rate limiting, input sanitization) in generated code

Human Judgment

AI cannot replace intuition, ethical judgment, or risk analysis during zero-day incidents or system crises.

No Undo Button

Small errors in production code can lead to irreversible financial or reputational damage.

Conclusion: Finding the Essential Balance
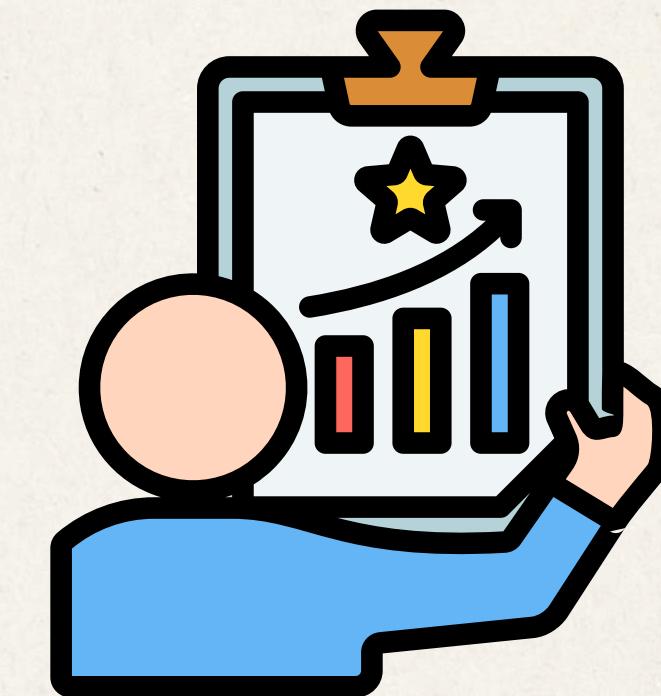
Efficiency ≠ Readiness

The key is conceptual mastery and human oversight.
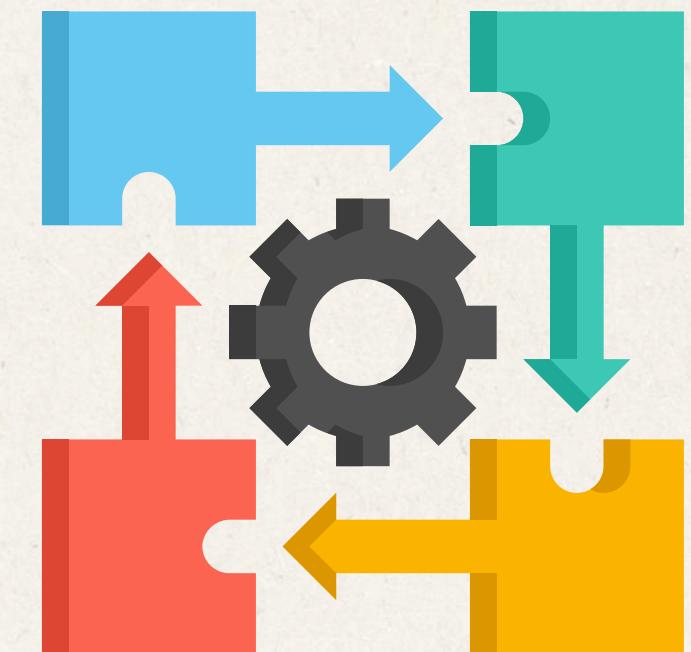
Redefine the Role

AI must be used as an intelligent supporting tool, not a primary crutch for solutions.

Prioritize fundamental

Curriculums must enforce manual debugging, documentation reading, and custom problem-solving sessions to build core logic.

Integrate Ethics and Security

Every AI-assisted project must include mandatory human review of security implementations and ethical trade-offs.

Questions and Discussion

Thank you for your time.