Robert McCoy

Reflection on Machine Learning Portfolio Artifact

Professor Dr. Lora Lounge

Indiana Wesleyan University

June 9, 2025

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Creating this machine learning portfolio artifact has been a transformative learning experience that pushed the boundaries of both my technical and creative capabilities. The process involved not only the selection and synthesis of complex algorithms but also the visual articulation of these concepts for a digital, graduate-level audience.

One of the most significant challenges encountered was finding the balance between technical precision and design clarity. Machine learning algorithms often require dense explanations, yet the medium of infographic demands simplicity and immediacy. To address this, I developed a modular tile system that could carry uniform structure while allowing visual variation—this strategy helped manage complexity while maintaining aesthetic integrity.

Another pivotal learning moment occurred when integrating generative visual tools with academic content. Several iterations revealed limitations in text rendering and typographic accuracy, which required manual correction and careful proofing. This unexpected issue underscored the importance of not over-relying on automation and reaffirmed the necessity of critical human oversight in AI-aided design work.

A central knowledge gain was the concept of model alignment and emergent behavior in training environments. To explore this further, I created a bonus artifact card drawing on recent examples of model misbehavior, such as the unexpected outputs from

GPT-4o and Claude 3. These incidents highlight how AI “rebellion” is often less about model autonomy and more about flawed training environments or incentives. Designing this card helped me better understand the mechanics behind unintended outputs and reinforced key course concepts such as algorithmic bias, loss functions, and the ethical stakes of model design.

Strategically, I learned how to embed academic rigor within creative digital products. By incorporating APA-aligned terminology and visually codifying algorithm types through restrained color systems, I ensured that the work remained scholarly without sacrificing design sophistication. The deliberate use of white space, modular grid systems, and thematic textures (e.g., steampunk-industrial) further reinforced my personal design identity.

This project connected course concepts—like data types, training models, and supervised learning—with broader applications in educational technology, ethical design, and technical communication. It also prompted me to reflect on how technical fluency and visual literacy intersect in professional communication. Overall, this artifact not only evidences my comprehension of core machine learning topics but also documents my evolving ability to translate complex knowledge into compelling, accessible visual frameworks.