

AI Immersive Photo Fusion for Boiler Gold Rush 2025

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Abstract:

This proposal presents a dynamic AI assisted mixed-media photography experience designed to merge advanced technology with artistic expression. The project aims to create an interactive and immersive experience that engages and showcases the Purdue student community and demonstrates innovative applications of AI in art. Through novel and unique use of these visual technologies, printable and shareable composites will be generated, merging subjects within captivating scenic backgrounds and artistic projected foreground elements.

Project Concept:

The installation will feature a large, department owned LED wall combined with projection mapping on the subjects displaying AI-generated graphics in real-time, responding to prompts given during photo sessions. Participants will be photographed in front of this customized backdrop, with AI tools generating unique and contextually relevant visuals on the fly. Additionally, an Xbox Kinect-like device could enable participants to interact with the AI through movements or drawing what they want, adding a layer of creativity and engagement.

Research and Development:

The research will focus on developing custom AI tools for real-time graphic generation and advanced compositing techniques and use of technology. This includes integrating subjects into custom AI-generated scenes using external lighting, projectors, and projection mapping. The goal is to create seamless and visually captivating images that blend the subjects with their digital environments in a dynamic real-time environment.

Campus Engagement:

To foster campus involvement, we will collaborate with various student clubs, such as dance groups, martial arts teams, cultural, and athletic clubs, to provide diverse and dynamic subject material. This will not only enhance the visual appeal of the project but also introduce new students to the wide range of student organizations at Purdue, allowing these organizations communicate something about themselves through artistic expression.

Scalability and Future Applications and Research

The project has significant potential for scalability, offering opportunities for larger entertainment, marketing, and educational events. The technology and process developed could be used for promotional events, rented or sold to entertainment companies, or integrated into museums or themed attractions. The setup could be repeated with similar rental costs, or for a permanent or promotional experience funded by the sponsor organization.

Degree Alignment and Extended Research

These types of activities align with Purdue's themed entertainment degree programs. Participant usage and feedback from the installation could also be used for academic research and presentations in topics of community engagement, creative interaction with AI, or even the role of technology in artistic expression.

Budget:

The \$3,000 seed grant plus an additional \$3,000 matching funds generously offered by my department will be allocated to purchase possible tools such as:

- AI software development tools and licensing
- Lighting, projector, or photo equipment rental or purchase
- Paying a developer to create AI scripts
- Printer, printing and display materials
- Hardware to run interactive engagement

This project promises to deliver an engaging and memorable experience for BGR 2025 attendees, highlighting Purdue University's innovative spirit and commitment to integrating technology and art.