

BRENTON VAVREK

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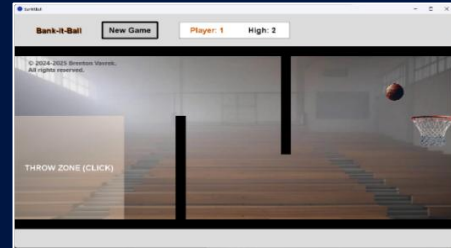
Design Thinking

I implement projects using the Design Thinking Process: Empathize ⇌ Define ⇌ Ideate ⇌ Prototype ⇌ Test

Creative Coding: Bank-it-Ball Game

In 2024 I enrolled in a creative coding class at Penn State that utilized the Processing 4 IDE to construct Java-based graphical applications. The class provided opportunities to apply object-oriented programming concepts learned in my programming courses. My final project was an arcade style basketball throwing game called Bank-it-Ball that includes sounds and graphics.

Java, Processing IDE, OOP, Game Design, AI Art, Game Physics



Edutainment: Color Cave Game

In 2024 for my Penn State upper-level Digital Multimedia Design (DMD) course, I created an educational entertainment game. The game was implemented using the GameSalad visual authoring tool. The design is a platform arcade-style game with educational mini-games that quiz the player about color wheel theory questions. The game app is published on the GameSalad Arcade website.

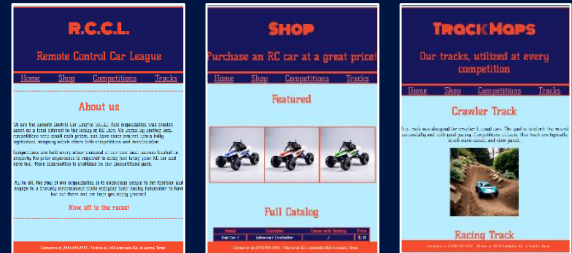
GameSalad, Game Design, AI Art, Photoshop, Musical Themes



Web Design & Development: RC Car Shop

In 2023 I enrolled in web design classes at Penn State. The final project for my Information Sciences & Technology (IST) class was to create an example online shopping website. I chose to create a remote-controlled (RC) car league website that hosts competitions as well as an online store. This learning opportunity improved my understanding of website layout and composition.

HTML, CSS, JavaScript, Web Design, AI Art, Photoshop



3D Modeling & Rendering: Chessboard

In 2023 I enrolled in a 3D digital art modeling class at Penn State. The class provided opportunities to learn about how to construct models, add textures, arrange scenes, apply lighting effects, and create renders. For one of my semester projects, I modeled a chessboard and its pieces using Blender and applied Physically Based Rendering (PBR) textures.

Blender, 3D Modeling & Rendering, PBR, Lighting, Textures



Graphic Design & Visualization: Infographic Posters

In 2024 I enrolled in a graphics design course at Penn State that focused on visualization. I created infographic posters to demonstrate coursework concepts. The first design conveyed a historical timeline for a local community park. The second was an analytical poster that visualizes the occurrence of specific sounds at a local caffè shop. The prints were created using the Figma design tool.

Figma, Graphic Design, Research, Data Visualization



Please visit www.brentonvavrek.digital to interactively explore these and other portfolio projects in detail.