

DOPPELGANGERS: PROJECT CHARTER

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PROJECT OVERVIEW

Background

Bison Bison Studio is in collaboration with Vancouver-based game studio Buffalo Buffalo to create an AI embedded party game pack, Doppelgangers, with the support of the Centre for Digital Media. The product will be developed within 3 months from January 4th, 2023 to March 24th, 2023.

AI technology and applications bloomed recently in society and gradually enter the public eye. We identify that an AI party game will be a bleeding-edge spin on traditional party games and will have a promising future with the curiosity of the public.

Doppelgangers is a traditional cross-platform party game comprised of four mini-games that explore different frontiers of AI research including chatbot, image generation, music generation, 3D generation, and voice-to-text. Player will use their personal mobile phone or computer devices to enjoy the fun experience brought by AI, while at the same time questioning the future of mankind.

Purpose

The purpose of this project is to explore the possibilities and limitations of bringing AI technologies into party games. Currently, there are only a few games that are embedded with AI and there are no party games that incorporate AI technology currently published. These existing games are still highly experimental with less attractive game mechanics and business considerations. Hence, it leaves a design opportunity for us to discover this niche market and be the first tier to develop a game using generative and machine learning AI technology that is fun to play and also stands alone as itself.

Stakeholders

Stakeholders	Stake in the Project
Bison Bison Studio Windy Wen Charlotte Guan Daniela Gamarra Diane Kim Philip Wittusen Ruby Wang	Project development team. They will provide the creative vision, documentation of research and process, and final deliverables. They are invested in creating high-quality product for portfolios and potential learning opportunities.
Buffalo Buffalo Patrick Owens Nick Spanos	Patrick Owens is the primary client of the project. Nick Spanos is the secondary client of the project. They are invested in the quality and delivery of the final product.
The CDM Jason Elliott	Project advisor.

Goals and Objectives

The goals for this project including both the vision of the product itself as well as the personal development of the team members.

Goals	Objectives
To design a leading AI party game in the market	The game should be both visually and mechanically attractive to players with high replayability. Come up with as many game ideas as possible and filter each idea to narrow the final direction.
To build a party game that is fun to play	The AI element should be an asset to the game instead of the only attraction point to the players. The development team will put "fun" as the priority in designing the game and use AI as a powerful tool to boost the user experience.
To design a game that could fulfill personal learning goals	The team will design and allocate the tasks rationally and effectively according to individual's learning objectives for the term.

Scope

The minimum deliverable for this project will contain the following:

Deliverable	Breakdown
High Fidelity Prototype of Selected Game Proof of Concept	<ul style="list-style-type: none"> • The quality of the final prototype visuals should be as close as possible to the final published version. • Part of the functionalities can be mocked up but should have mechanical feasibility.
Detailed Project Overview Document	<ul style="list-style-type: none"> • Project Overview (~1 Page) <ul style="list-style-type: none"> ○ Description of the project, its proposed revenue model, and its target audience • Detailed Project Summary (~5 Pages) <ul style="list-style-type: none"> ○ Description of the project's design ○ Description of the project's innovative qualities ○ Technical description of the development and programming • Game Design Documents <ul style="list-style-type: none"> ○ Detailed GDD for 1 game ○ Simple GDDs for the other 3 games (~1 page) • Research Documentation <ul style="list-style-type: none"> ○ Technical Research ○ User Research ○ User Testing ○ Market Research

Out-of-Scope

The following items are out-of-scope due to time, monetary, and technical limitations:

Out-of-Scope	Justification
Computing power cost	The considerations of computing power cost for AI implementation of the game should be taken care of by Buffalo Buffalo
Server maintenance cost	The considerations of future server cost and maintenance cost should be taken care of by Buffalo Buffalo

Constraints

The following items on the list is the constraints of the project:

Constraint	Justification
Fixed project duration	The project will run for 13 weeks with the CDM and Buffalo Buffalo to align weekly. Priorities will be carefully set to ensure the most important objectives are achieved.
Fixed team capacity	Bison Bison Studio is composed of 6 members with their own fields of expertise. Due to the lack of programmers, some technical issues in the final prototype might not be resolved within 13 weeks.
Limited graphical fidelity	While the final deliverable will attempt to create a high-fidelity prototype that is close to the final product, this will depend on the current skills of the artist in the team and the length of the production.
Limited access to new technology	With a limited budget, the team might not have access to premium AI models due to the higher cost of API. The AI implemented for the prototype might not work as perfectly as others.
Limited computer figuration	With the limit of computer figuration, the team might not be able to run codes that involve deep learning.

PROJECT APPROACH

Team Roles and Responsibilities

We are lucky to discover that each member of the the team has a hybrid skillset. In order to make the best of our strengths, each member has taken one major responsibility for a specific section of the project, along with secondary responsibilities. Team members will work collaboratively to take care of all potential gaps that may occur.

Role	Name	Responsibilities
Project Manager UI/UX Designer Technical Artist	Windy Wen	Project management, team communication, documentation, UI/UX design, game design, pipeline development, 3D art toolkit
Product Owner 3D Artist 3D Designer	Charlotte Guan	Advisor communication, project progress assurance, 3D asset creation, animation, video editing, environment design
Product Owner Game Designer 2D Artist	Daniela Gamarra	Client communication, project quality assurance, 2D asset creation, marketing, narrative design, game design
2D Design Lead 2D Artist UI/UX Designer	Ruby Wang	2D design and art, logo and branding, concepting, 2D art direction, UI/UX design, wireframing, assistant coder
3D Design Lead 3D Artist Technical Artist	Diane Kim	3D design and asset, 3D model and texture, 3D art direction, lighting, technical art pipeline development, 3D animation and rigging
Tech lead Programmer Game Engine	Philip Wittusen	Unity developer, front end developer, back end developer, implementing game systems, technical quality assurance
Faculty Advisor	Jason Elliott	Team guidance

Communication Plan

We use different tools and platforms for communication depending on the purpose to work efficiently and effectively.

Channel	Viewer	Purpose
Discord	Team	In-team daily communication, virtual team meetings
FigJam	Team	Brainstorm, ideation, research findings
OneNote	Team	In-team documentation, meeting notes
CDM Room	Team	In-person team and client meetings
Slack	Client, Team	Client daily communication
Coda	Client, Team	Project management, casual progress documentation
Google Slide	Client, Team	Weekly check-in presentation
Google Doc	Client, Team	Formal documentation
Google Meet	Client, Team	Virtual client meeting
Google Drive	Client, Team	File sharing and storage
Email	Others	Formal communication

Assumptions

Assumption	Justification
All people could be a potential player of our party games	A party game is usually played during people gathering, either in-person or virtually. Not all of the people invited to the party game necessarily need to be digital gamers or have digital game experiences. Instead, the party owner or owner of the game copy is more likely to be a regular gamer.
The development methodology is technology-driven	The development team should design the games based on the constraints and limitations of the current available AI softwares instead of using user-centred design methodology because the feasibility of the final game is the priority of this project.
Budget and purchases	BuffaloBuffalo approves a budget of a few hundred dollars and Amazon Azure credits to support the development. Purchases need to be proposed and approved by Patrick or Nick before execution.
The digital game prototype will be developed in Unity with C# as the major computer language	Party games usually require less quality in models and rendering. Unity is more suitable for the games that we are going to develop with fewer possibilities to crash. It requires fewer computer configurations than other game engines like Unreal. C# is a common language used in Unity.

Risk Assessment

Risk Description	Likelihood	Impact	Mitigation Plan
Miscommunication	Medium	Misunderstanding in terms of expectations or requirements between both parties.	Conduct daily scrum and weekly meetings to ensure all members are in alignment internally and externally.
Schedule conflicts	High	Difficulty in scheduling meetings and in-person working periods.	Secure at least one regular meeting time per week. If needed, proceed with a maximum of one person's absence and update the person with meeting content.
Inexperience with new technology	High	Longer time for research and learning, as well as the production stage.	Constantly seek advice from advisors and other available resources. If necessary, have a safer backup plan.
Health Issue	High	Delay in tasks due to lack of working hours. May result in the delay of final deliverables.	Conduct daily scrum to update others with the progress. Establish team rules to inform the blocker immediately so other members could take over.
Scope too big	Low	Creates tension, delay in client required deliverables, and lose focus.	Establish task priorities for each development stage to ensure every member is on the same page.

Detailed Milestones & Deliverables

There are four milestones for the project: research, ideation, production, and final delivery. However, depending on the type of this project as well as the fast-changing AI community, the research and ideation stages are ongoing processes and will continue to be conducted throughout the entire project after the official milestone.

Milestone	Due	Deliverable
Research	Jan 23	Research on: <ul style="list-style-type: none"> ● AI Softwares ● Feasibility study ● AI Games ● Party game design ● UI/UX design ● Market & revenue ● User research
Preproduction	Feb 10	Ideate on: <ul style="list-style-type: none"> ● 4 game ideas using chabot, image generation, deepfake, text-to-voice, or other AI technologies ● Have one game chosen by client to proceed to digital prototype
Production	Mar 14	Develop: <ul style="list-style-type: none"> ● One high-fidelity game prototype ● GDD drafts for four games ● Detailed project overview document ● Research documentation draft
Final Delivery	Mar 24	Deliver: <ul style="list-style-type: none"> ● High Fidelity Prototype of Selected Game ● Detailed Project Overview Document <ul style="list-style-type: none"> ○ Project Overview ○ Detailed Project Summary ○ Game Design Documents ○ Research Documentation

Approvals and Turnaround

The CDM, specifically Jason Elliott, will represent the client for this project and will be responsible for supplying feedback and approval of each milestone.

Milestone	Approval Conditions & Turnaround Dates
Preproduction	<p>Submit by Tuesday Feb 7th, 2023</p> <ul style="list-style-type: none"> ● Project charter draft ● Four potential game ideas for documentation ● One idea to proceed to production <p>Feedback due by Thursday Feb 9th, 2023</p> <ul style="list-style-type: none"> ● Client Nick gives feedback for improvements ● Advisor Jason gives feedback for revisions <p>Final Approval by Tuesday Feb 14th, 2023</p>
Production	<p>Submitted by Tuesday Mar 14st, 2023</p> <ul style="list-style-type: none"> ● High-fidelity game prototype ● GDD drafts for four games ● Detailed project overview document ● Research documentation draft <p>Feedback due by Thursday 16th, 2023</p> <ul style="list-style-type: none"> ● Client Nick gives feedback for improvements ● Advisor Jason gives feedback for revisions <p>Final Approval by Tuesday Mar 21th, 2023</p>
Final Delivery	<p>Submitted by Friday Mar 24st, 2023</p> <ul style="list-style-type: none"> ● One detailed GDD for one chosen games ● One high-fidelity game prototype ● Three simple GDDs for other games ● Project overview document ● Detailed project summary ● Research documentation

APPROVALS

Prepared by _____
Project Manager

Approved by _____
Project Advisor

[Stakeholders]

[Stakeholders]

Agreed by _____
[Team Member]

[Team Member]

[Team Member]

[Team Member]

[Team Member]