Faculty Staff Diversity Mini-Grant Application.

Project Title

Building an Anishinabek Virtual Village: Expanding Native American History Reach Through Virtual Reality Experiences

List the members of the team

Team member	Position	Role on Team	Contact information
Prof. Jacob Pollak	Associate professor, Digital Animation and game design	Project Lead, VR & Design expert	151 Fountain ST NE, Grand rapids, MI, 49503 Office: ATC-177 Phone: 616 643 5749 Jacobpollak@ferri.edu
Dr. Mohamed Abusharkh	Assistant professor, Digital Media software engineering	Design and Implementation	151 Fountain ST NE, Grand rapids, MI, 49503 Office: ATC-171 Phone: 616 643 5748 MohamedAbusharkh@ferri.edu
Prof. Kyle R. Bourcier Adjunct Faculty	Adjunct professor Digital Animation and Game design	Design and Implementation	151 Fountain ST NE, Grand rapids, MI, 49503 Office: ATC-171 Phone: 616 643 5748 KyleBourcier@ferris.edu
School of digital media student intern	Multiple students have the skill and interest to work on this. Students will be hired as soon as the project is approved.	Digitizing historical Assets	Ferris Grand rapids 151 Fountain ST NE, Grand rapids, MI, 49503 Office: ATC-182 Phone: 616 643 5736

Contact Information for Team Leader:

jacobpollak@ferris.edu
Phone: 616 643 5749

Project Summary/Abstract

The project aims to foster cultural awareness of Anishinabe Native American history and traditions at Ferris State University and in West Michigan through our partnership with Grand Rapids Public Museum

(GRPM). The project includes building a prototype virtual experience of an Anishinabe village. The project will build on relations that we have in place with GRPM in which the target exhibits will be installed and shown. This expands the reach for Native American history as it exposes it to GRPM visitors (350,000 visitors last year according to the GRPM 2018 report). It also encourages the migration of ideas from, and encourages respect for, the Anishinabe culture.

The project builds upon solid experience and knowledge from previous projects in Virtual Reality in which we at the School of Digital Media (SDM) designed engaging experiences based on historical artifacts as taken from the GRPM archives.

The project will take end users on a virtual trip in time to visit a Anishinabe village. The project would include the design and implementation of such experience. As a virtual based product, this is not limited to a certain location, or institution. It can be installed at Ferris, and used various times at any relevant event.

In addition to the great cultural impact and penetrating reach, both the equipment and knowledge gained while designing and implementing such an intricate project, will carry on to other digitization and VR-based projects. With the virtual reality market worth increasing to near $45 Billion by 2024, this gives Ferris an edge as an institution in the field and will represent an asset for future projects that target digitization of historical or other artifacts.

The implemented product will be built in 2 courses during Fall 2020 in the DAGD program (namely DAGD 315 Digital Media Productions and DAGD 340 Junior Project). This project will serve as a theme and focus for the student projects in these courses. The goal of using this project in these courses is to help students adopt research based perspectives when building historically based content. Thus, it will impact students' games and digital media products which typically suffer from utilizing main stream media's ignorant or incomplete assumptions rather than being based on factual research.

Project Narrative.

Discuss the need for this project;

1-VR digital experiences are significant to the future of cultural and diversity supporting exhibits

In a recent interview. Secretary of the Smithsonian Institution G. Wayne Clough highlighted the importance: "In the past, the creative activities were entirely behind the walls of museums and collection centers. The public only got to access that through labels in exhibitions, which told them what we thought. Now, in this new world, people actually will help us design exhibitions, and it will be interactive"

Interactive exhibitions that rely on VR technology and "digital twins" represent the current direction in which museums and cultural institutions are heading towards. The development in technology means almost every historical artifact can be modeled and delivered digitally. This clearly offers access that is unlimited by geographic location, position of the artifact, time and other limitations imposed by classic artifact. Digitized artifacts would be available in underrepresented communities that do not necessarily have access to it. It will also mean that it can be utilized in multiple institutions at the same time.

However, other than access to accurate digital virtual copies, the user experience is an effective factor. The project aims at creating immersive experience of being in an Anishinabe Village not only digitizing individual artifacts. This means the user is able to be in the village, interacting with the elements in it replicated virtually.

2-Increasing Ferris community and exhibit audience awareness of truthful to source Anishinabe lifestyle and history

The project will include compiling reference material based on real Anishinabe Village artifacts.

3-Building reference material and immersing students in accurate material reflecting Anishinabe away from main stream media stereotyping to be utilized

In addition, this information will serve as inspiration for games to be built in Fall 2020 based on this information.

4-The equipment along with the skill set will be available as an asset to the University for future digitization or VR experience deign project in the projects.

Building VR experiences continues to gain traction within Ferris State University. Multiple internships for students in the SDM were facilitated and continue to be facilitated through the demand from the industry for this skillset.

Provide a detailed description of the project, including how it will be implemented and the specific roles of each member of the team;

The SDM team has previously supervised the implementation of the GRVR project which includes the constructing a VR version of a few blocks of modern downtown Grand Rapids. Based on the work of that project, we plan the following roles for the each team member:

Jacob Pollak: Liason with the GRPM; help students navigate the GRPM archives and resources; provide overall project management and project coordination. Facilitate designing and implementation of the project. Lead user experience design.

Mohamed Abusharkh: Design data architecture systems and provide programming support.

Kyle Bourcier: Lead the students in the production of digital twins of the artifacts.

Student Intern: Produce work as necessary for the completion of the project; The student will work on digitizing artifacts and help integrate all of the diverse pieces to help complete the project.

Summarized Action plan for the project:

Step	Team member roles
1- Research activities to collect information on the modeled village. Prepare list of used artifacts.	Pollak, student intern
2- Design the model for the VR village.	Pollak, Bourcier, Abusharkh
3- Implement the VR village using VR software	Pollak, Bourcier, Abusharkh, Student intern
4- Produce, test and evaluate the built model.	Pollak, Bourcier Abusharkh, Student intern
5- Exhibit design in collaboration with GRPM	Pollak, Student intern
6- Exhibit installation for GRPM	Partner institute
7- Documenting Village model and accompanying information and preparing it for student access.	Abusharkh, Student intern
8- Review Anishinabe information and impressions in main stream movies, digital media products (games and movies)	Pollak, Abusharkh, Student intern
9- Open workshop to discuss products, and research results with DAGD students.	Pollak, Abusharkh
10- Readying the exhibit for Ferris Media festival 2021. (time could change based on product readiness)	Pollak, Abusharkh, Student intern
11- Preparing final report.	Pollak, Abusharkh

Provide the timeline for the project. Be sure to specify at what point the grant will be considered complete. Final Report is due within 3 months after completion;

Phase	Deliverable	
Project initiation	Software + Equipment acquired +student hired	March-31-2020

Compiling Anishinabe list of digitized artifacts and list of main sources for Anishinabe information	Source material for VR village ready	April-30-2020
VR digital village Prototype	Prototype is finished	August-31-2020
Utilizing products as a reference for course project theme	Various projects benefiting from the built product	September-10-2020
Implementing VR Digital village	VR digital village is implemented	Dec-4-2020
Delivering to partner museum	VR Exhibit ready for installation	Dec-18-2020
Evaluation of project.	Project is complete	Project is complete on Dec-18th-2020

Target audience size and publication/promotion details

Product	location	Audience (size/choice)	Audience choice	Promotion
Museum exhibit	GRPM	GRPM visitors (350,000 last year according to the GRPM 2018 report)	Open audience	GRPM
Ferris exhibit	Ferris campus	Ferris students and faculty	Open audience	University publications
DAGD 2 courses	Ferris Campus	2 X 20 students	Course students	Class

Students hired to help build the product will be chosen based on required technical skills and interest in Anishinabe history.

How the project relates to the current Ferris State University Diversity and Inclusion Plan

As shown in the outcomes table below, we believe the project supports Goals 1, 2, 5 and 6 of the diversity and inclusion plan.

Goal 1: Create a University that is respectful of differences and civil toward people who are different

By educating exhibit audience and especially immersing our students in the tradition and culture and daily life of the Anishinabek, It supports inclusion and respecting differences. With the historical spin and comparing the state to what it is now, an appreciation of their way of life will be developed.

Goal 2: Build and maintain an infrastructure that supports diversity and promotes inclusion

As a permanent exhibit/software product, the VR village stays as part of our infrastructure supporting diversity. Moreover, the project represents a first step that can be expanded to larger VR exhibits of other underrepresented groups using the acquired equipment and skill

Goal 5: Improve inclusivity by incorporating diversity and inclusion in significant ways in teaching, learning, and research

As mentioned, the discussions on the topic will feature in 2 DAGD courses. The VR village can be used by any of Ferris departments or partnering institutes for teaching activities.

Goal 6: Build upon existing partnerships and create new partnerships that enhance the University's commitment to and work with diverse populations

The project builds upon existing partnerships between SDM and GRPM and utilizes GRPM's incredible reach within west Michigan. The project has the potential to give an opportunity for reaching out to Anishinabek in the future opening many possibilities.

Measurable Outcomes

Outcome	Relation to diversity and inclusion	Assessment
1- Designing and implementing a prototype VR digital Anishinabe village.	Goal 2: Build and maintain an infrastructure that supports diversity and promotes inclusion	Review outcome 2 Final report will highlight where software products are hosted.
2- The digital Anishinabe village is expected to be installed and shown at the Ferris Media festival and at the GRPM.	Goal 1: Create a University that is respectful of differences and civil toward people who are different Goal 2: Build and maintain an infrastructure that supports diversity and promotes inclusion Goal 6: Build upon existing partnerships and create new partnerships that enhance the University's commitment to and work with diverse populations	Digital artifacts utilized by the GRPM in 2021. Exhibit shown at Ferris Events Final report will highlight dates and audience size.
3- The VR village and collected reference material through research phase will be available to be used in two DAGD courses in FALL 2020.	Goal 2: Build and maintain an infrastructure that supports diversity and promotes inclusion Goal 5: Improve inclusivity by incorporating diversity and inclusion in significant ways in teaching, learning, and research	Projects for each course will benefit from Anishinabe source and village material. Final report will highlight projects and benefit areas.
4- Students of these 2 classes will review and use the references as	Goal 2: Build and maintain an infrastructure that supports diversity and promotes inclusion	Projects for each course will benefit from Anishinabe source and village material.

inspiration for course projects (games and other digital asset design)	Goal 5: Improve inclusivity by incorporating diversity and inclusion in significant ways in teaching, learning, and research	Final report will highlight projects and benefit areas.

Expected completion date: ___Dec. 18th, 2020_____

Budget Overview			
	Requested Grant Funds	**Funding from other sources**	**TOTAL BUDGET**
STIPEND	**218 hours X $12/hr** **Student intern stipend**		**$2616**
RESOURCE MATERIALS	**Equipment and resource materials a per the attached table below** **$2,374.28**		**$2,174.28**
TOTAL	**$0**	**$0**	**$4990.28**

Item Description	Price	Retailer	Notes
Canon EOS SL2 3 Lens Bundle	$779.99	Costco	Comes with 18-55mm, 75-300mm & 50mm Prime Lens; Other options avaliable starting @ $499.99
Canon - EF-S 24mm f/2.8 STM	$129.99	Best Buy	Only Needed for Envrionmental Photogrammetry
AgiSoft PhotoScan Professional EDU	$549	AgiSoft - Online	
X-Rite ColorChecker Passport Photo	$73.99	Amazon	Only Needed for Envrionmental/Texture Photogrammetry
Orangemonkie Foldio360	$139	Amazon	Smart Automated Turntable
AmazonBasics Portable Photo Studio	$135.99	Amazon	Foldable w/ Built in LED Lights
JSVER Gear VR Case	$16.99	Amazon	This is for Oculus Go, not entire kit. Pelican Case would run about $169
LED Ring for DSLR	$29.99	Amazon	
BONFOTO B690A	$64.99	Amazon	
SanDisk 64GB ULTRA SDXC x3	$54.36	Amazon	3 Cards

In addition to

Oculus Quest 64 GB	399.00	Best buy	