

2024-25 HIVE Summer Internship Project

Women in Space Visualisation - 8K short films

34HUM_MCASI_8KDoco

Primary Academic Supervisor

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Project Background

The WA Museum will soon install an 8K Tiled Wall display into the Innovations Gallery at the museum's main Perth site Boola Bardip. This display is an equivalent of the Tiled display at the Curtin HIVE which has a display resolution of 24 megapixels (7680-by-3240) and a physical area of 10m². We have an opportunity to showcase some of Curtin's high-resolution visualisation research projects on this display.

In this internship we are proposing the development of two 8K video sequences which highlight the work of two WA women working in Space Science:

- Mars Crater Visualisations with Professor Gretchen Benedix
- Radio Astronomy Visualisations via GLEAM (The GaLactic and Extragalactic All-sky MWA survey) with Associate Professor Natasha Hurley Walker

This project provides an opportunity to develop eye-catching visuals that can be seen by hundreds of thousands of museum visitors.

Project Description, Expected Outputs, Possible Stretch Goals

The primary output of the project will be two 8K video sequences of approximately 6 minutes long, combined with high-resolution graphics that pan and zoom slowly across the screen. There would be a narrative developed in cooperation with a discipline expert that will nicely work in with the flow of the graphics. The narrative will be voiced by the discipline expert and subtitles will appear on the bottom of screen. Annotations and highlights will appear on screen as those items are discussed. The graphics could fade between different visualisations/data to reveal different aspects of the topic.

Possible stretch goals might include

- (a) consider showing a green-screened life-size representation of the researchers on screen for part of the video sequence, and
- (b) scope up a third topic for future production into another 8K video sequence for the Museum's Tiled display.

Links to background reading and any relevant recent work in the field

1. The Mars Craters video sequence would use the visuals shown here: <https://hive.curtin.edu.au/research/CDA-94M-release/>
2. The GLEAM video sequence would use the visuals shown here: <https://gleamoscope.icrar.org/gleamoscope/trunk/src/>
3. Claudia Dickson HIVE internship report (Fremantle Historical Panoramas Audio-Visual Tours)
4. Corey Battersby HIVE internship report (Fremantle Harbour Animated Panorama Project)

What type of visualisation will the student develop or produce?

The student will develop two 8K video sequences for playback on the Museum's TILED display.

The intern will use video editing and production techniques to create two video sequences that explore and explain the visualisations developed in previous projects.

How will the visualisation contribute to your research outcomes?

The output will be two 8K videos of approximately 6 mins long, combined with high resolution graphics that pan and zoom slowly across the screen. There would be a narrative developed in cooperation with a discipline expert (talent), voiced by the talent and subtitles appear on the bottom of screen. Annotations and highlights will appear on screen as required. Graphics could fade between different visuals to reveal different aspects of the topic.

If the project is successful, where would you consider publishing the results?

The 8K video sequences will be used as content for the TILED Display at the WA Museum Boola Bardip.

Another outcome of the project would be a workflow that can be used to showcase other high-resolution visualisation research projects.

Draft Project Timeline:

Week 1

Introduction to the project; scoping of tools required; interview discipline experts and start developing script/storyboards

Week 2

Access to discipline experts' resources; Start experimenting with visualisation editing workflow; Script/storyboard refinement

Week 3

development of workflow for the video production process

Week 4

Finalise the scripts and storyboards; Sound recording of a draft voiceover for each sequence to confirm timing and sequencing

Week 5

Record the final version of the voiceover script for each sequence

Week 6

Video sequence post-production

Week 7

Video sequence post-production

Week 8

Finalise the two 8K video sequences

Week 9

Report writing; presentation and demonstration preparation

Week 10

Final presentation, showcase of demonstration on TILED or other displays and report submission

Student Experience and Supervision:

How often will you meet with the student over the 10-week period?

Once per week

Your work desk location and the location of student desk

Possibly HIVE Staff Office: Building 201, Room 212 – To be determined

Student Attributes:

Please indicate any preference for student's academic discipline or field of study

The project would suit a student with interests in screen arts, video and audio editing, advanced visualisation methods.

Students from the following study areas should particularly consider applying for this internship: screen arts, design, animation, etc.

What competencies are required to start this project

Intermediate - 2D image and/or video software (e.g. Adobe Suite, Sony Vegas)

Do you have any other student attributes you think are important to the project?

The project will be particularly attractive to a student with a great imagination who can envisage and create innovative opportunities to showcase the achievements of the discipline experts in a way that will attract and engage with new audiences.