Mobile App Design Intro

Daria Tsoupikova

1- **1 pm**
Introduction – class goals and overview – syllabus and schedule
Introduction to EVL
Student Data Sheet

2- **2pm**
Client Presentation / Q & A
Dr. Hedda Sander
Dept. Supply Engineering, Inst. for Bio- and Environmental Technology
Professor, Ostfalia University, Germany

3- **4pm**
Introductions and Portfolio Presentations

4- **5pm**
Team formation and discussion

Mondays / Wednesdays
1-6.40pm
2068 Electronic Visualization
Laboratory (EVL)

Engineering Research
Facility (EFR)
842 W Taylor St

2068 Cyber-Commons

Intro

Design and Development
of new mobile app

Project defined by a
professional client

Work in teams

Year-long (Fall + Spring)

Research
+ research (Fall)
+ design (Fall)
+ development process (Spring)

Intro

Design and Development of new mobile app

Project defined by a professional client

Work in teams

Year-long (Fall + Spring)

**Research
+ research (Fall)
+ design (Fall)
+ development process (Spring)**

Curriculum

Students explore the current standards and best practices of mobile design and user experience (UX).

The course utilizes a hands- on approach to guide students through learning and understanding the mobile design and development process.

This course is primarily designed for students with minimal technical experience.

By the end of the course, students will be able to plan, design, and implement a front-end functioning mobile app.

Fall

Developing effective graphics
and UX for mobile media
Problem understanding
Research methods
Market research
Ideation / Concept
User Experience (UX) research
User interface design
UX design
User studies
Prototype
Interactive simulation
Wireframes UX
Hi fi Design - storyboard
Initial development

Curriculum

The curriculum will be presented in two sequential areas of practice:

The Fall semester will be devoted to problem understanding, research, ideation, design and initial development. Design includes user interface design, graphic design, and UX. Solution prototypes will be presented to the client in the form of storyboards.

The Spring semester will be devoted to translating your design solution into a functioning application. This includes programming for all interactivity and multimedia required for mobile development, user testing, and incorporating the feedback into the process.

Objectives

Upon successful completion of the course, students should be able to:

1)   Design and implement innovative mobile app based on effective UX design principles.

2)   Conduct the necessary research to inform the design and development process.

3)   Work in teams.

4)   Build functional prototypes and interactive simulations for mobile devices.

5)   Design mobile interfaces ready to be implemented into coding.

Objectives

This course assumes that students have
a working knowledge of computers, intermediate design
knowledge, and familiarity with web design principles and
software.

For the duration of the course we will be using the Apple
Macintosh platform and a variety of design software.

While various software packages will be utilized, the course
focuses on the research and development of creative concepts,
ideas and the quality of their visualization.

Working collaboratively —
show early, share often, get feedback.
YES, even "ugly" sketches!

Problem Orientation

Work in teams of 3-4
communication
project management
regular meetings
reports
roles and tasks
progress documentation

Work with a client
research
stakeholder interviews
conduct market and
user research
UX and UI research
user studies

Problem Orientation

Work in teams
   communication
   project management
   regular meetings
   reports
    roles and tasks
   progress documentation

Work with a client
   research
   stakeholder interviews
   conduct market and
   user research
   UX and UI research
    user studies

DES 420

Design for Mobile:
   user interface
   interactivity
   mobility
   user experience (UX)
   mobile media technologies

Design Process:
   UX design
   client presentations & Q&A
   UX wireframes
   iterative design
     development
   incorporating client
     feedback
   low & high fidelity
     prototypes

Problem Orientation

Work in teams
   communication
   project management
   regular meetings
   reports
    roles and tasks
   progress documentation

Work with a client
   research
   stakeholder interviews
   conduct market and
   user research
   UX and UI research
    user studies

DES 420

Design for Mobile:
   user interface
   interactivity
   mobility
   user experience (UX)
   mobile media technologies

Design Process:
   storyboard design
   client presentations
   iterative design
      development
   incorporating client
      feedback
   low & high fidelity
      prototypes

DES 421

Functional prototypes
Mobile interface design
Current practice:
   development technologies
   tools
   frameworks
   programming languages

Production process:
   programming
   scripting
   debugging
   uploading on the Cloud
   collaborating with
      developers

Hardware/Software

Mac 2019+
No windows

Adobe CS
Photoshop
Illustrator
InDesign
XD
Marvel app

Xcode (IB+Swift)
Swift

Online Tools

-Course website (schedule, links, assignments)
www.evl.uic.edu/mad/schedule.html

-Blackboard ("Bb") (grades, discussion boards)

-**Box**(class folder with all the files)

Electronic Communication Mantra

If it's an grade, quiz or discussion it's on Blackboard;

if it's any material, link, assignment, date or video, it's on the class website;

if it's a file upload/download it's on Box.

New tools

We will mix up and try tools as we will move forward with app design

**Professional Practice I
Fall**

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Readings

iOS Programming. The Big Nerd Ranch Guide by Christian Keur, Aaron Hillegass, 7th edition

Beginning Xcode by Matthew Knott Daniel Bramhall

Mobile Usability by Jakob Nielsen and Raluca Budiu, New Riders

The Elements of User Experience: User-Centered Design for the Web by Jesse James Garrett

A Project Guide to UX Design: For user experience designers in the field or in the making by Russ Unger and Carolyn Chandler

Learn Xcode Tools for Mac OS X and iPhone Development by Ian Piper

Typographie by Emil Ruder, Arthur Niggli/Teufen

The Elements of Typographic Style by Robert Bringhurst, Hartley & Marks Publishers
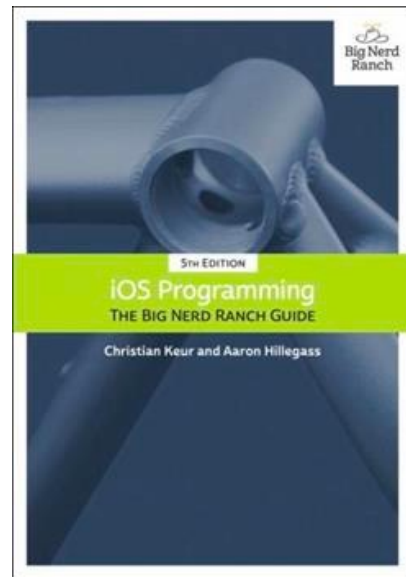
Evaluation

Team project, assignments (50%)
A1 Market research
A2 UX design
A3 Wireframe
A4 Revisions
A5 Icon
A6 Storyboard Midterm
A7 Revisions
Final

discussions, quizzes, peer evaluation ($30%)

A5 icons
quiz
peer evaluation

attendance & participation (20%)

your willingness and ability to accept client & faculty feedback

Evaluation

14 classes
11 work sessions

Attendance is mandatory
>2 absences – final grade reduction
late submissions will be penalized
by 15% grade reduction for the first day

10% for each day afterwards

Hardware failure is not an acceptable excuse for late assignment.

You should always make a backup of your files.

Assessments

Formative
Practice & confidence build
Self-Checks
Bb auto graded (quiz, discussion)

Summative
Projects
Presentations

Be prepared for a lot of hard work
Self – studies outside of the class
Research/design/code
Class time is limited-
In-depth course to prepare your graduation portfolio

Schedule

Week 1 — Introduction
Week 2 — Labor Day
Week 3 — UX and UI design
Week 4 — Team Presentations
Week 5 — Collaborative UX Wireframe Presentations
Week 6 — Icon Presentation
Week 7 — Storyboard Design
Week 8 — Lab
Week 9 — Midterm
Week 10 — Intro to App Development
Week 11 — Intro to Xcode
Week 12 — Interface Builder
Week 13 — Lab
Week 14 — Lab
Week 15 — Final Review

Flow

Flow is an app developed for the UIC ENT clinic in order to demystify the patient's waiting experience. A visual timeline maps each step of the patient's visit, from the waiting room to the doctor check-up. Flow is both informative and calming by giving the patient the option to read up on doctor bios during their wait or participate in relaxing meditations.

Daily Bytes

Daily Bytes was developed for the UIC Department of Surgery.
The app is based on a spaced-education (SE) theory to teach core content
to M3 medical students while assessing their knowledge and retention of material.

Daily Bytes Story Board
Jessica Kim, Ryan Hernandez, Will Dutton

Algae Watch

The Algae Watch app will allow citizen scientists, scientists, and students to obtain a rough estimate that resembles the state of algae in their area and also provides a step-by-step process that guides users on how to obtain and input their own data on algae blooms, as well as educating users on the subject of toxic algae blooms.

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Fall**

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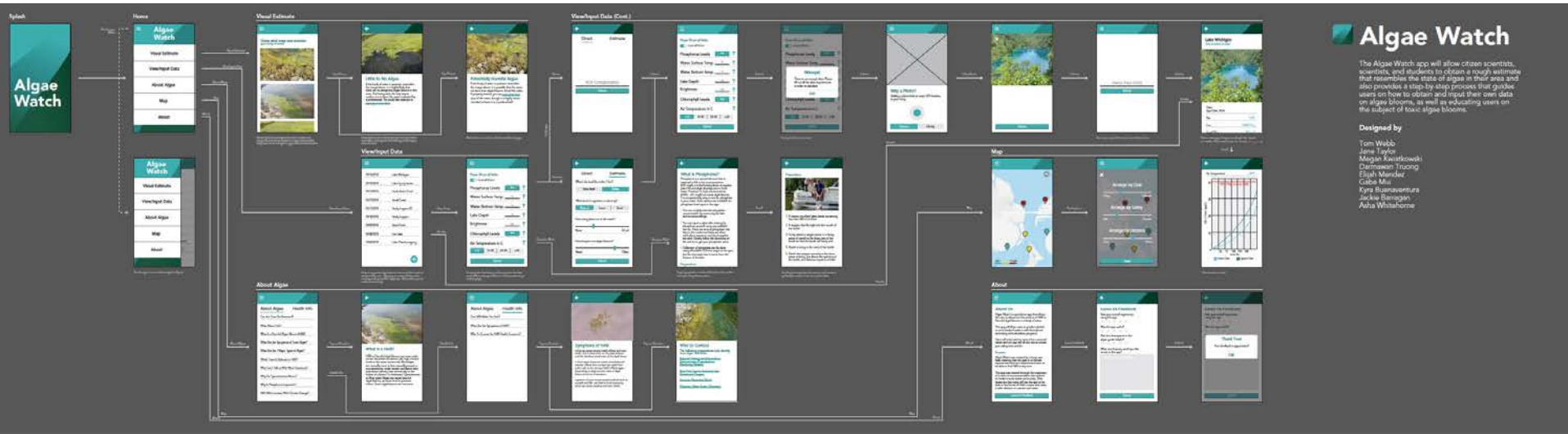
Villis

A patient-centered app that records information about their heart stent implant data.
Patients receive a variety of implanted devices but due to lack of integration of hospital IT systems in
about the devices is not readily available. Often this lack of information at hand leads to emergencies
potentially aggravate lethal results.
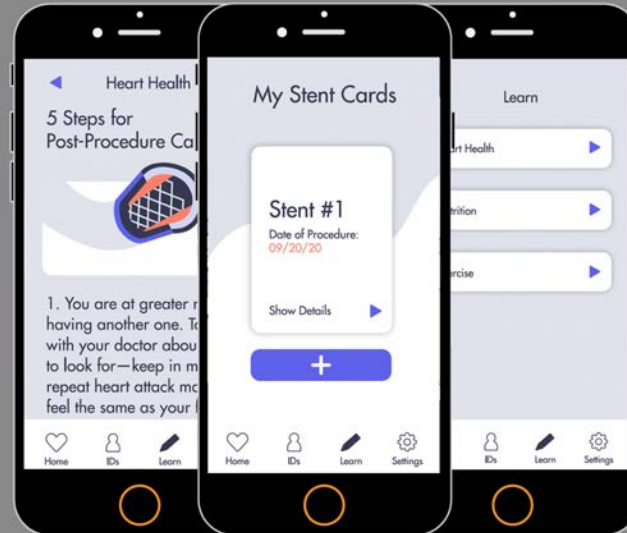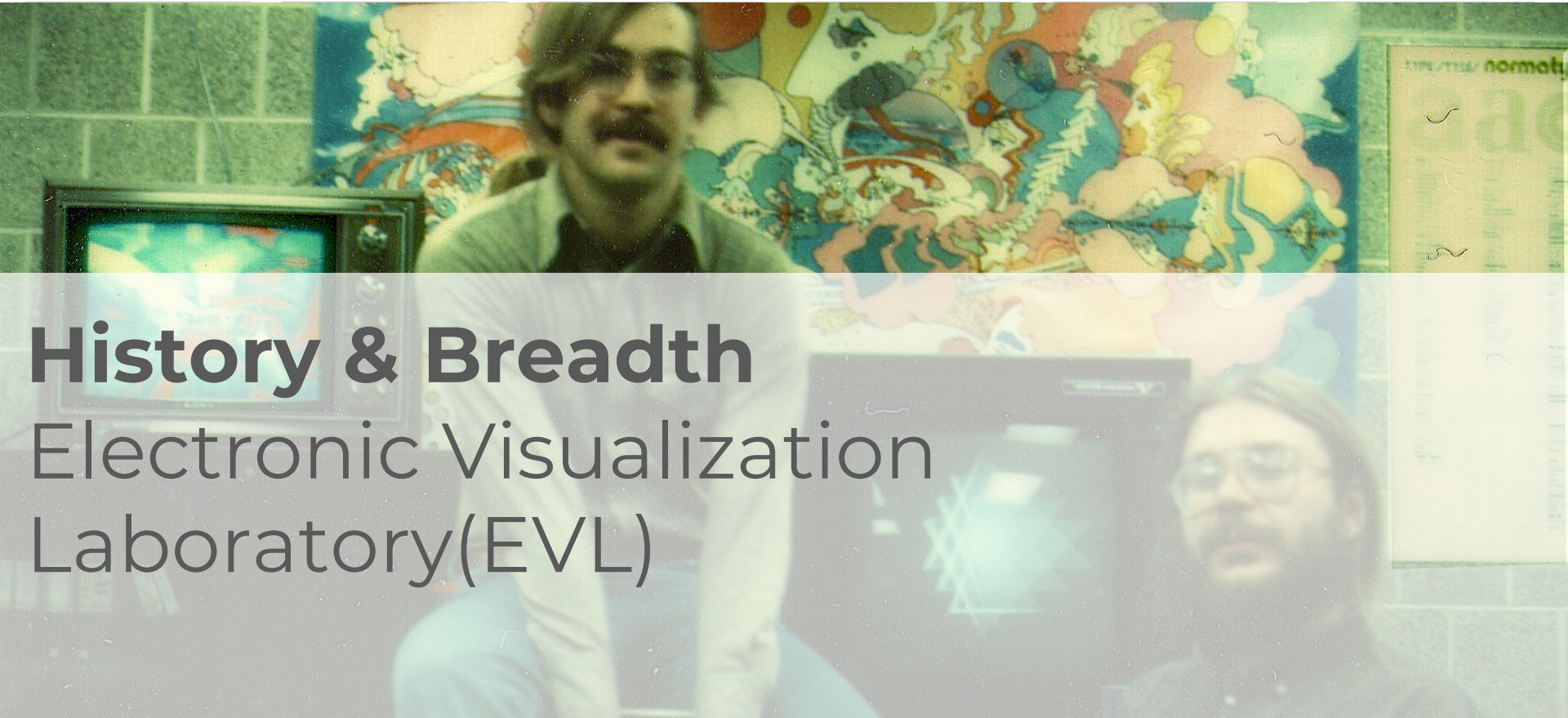
History & Breadth
Electronic Visualization Laboratory(EVL)

40+ years of Art/Science collaboration at UIC

Joint program: CS and Art & Design departments

First program in the US offering MFA that is a formal collaboration of art and computer science 1973-2014

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Advanced networking
  research
Distributed computing/
  visualization
Collaborative software
Advancement of tools
  and techniques for
  collaborative work over
  high-speed, experimental
  networks
Development of viable,
  scalable, deployable
  stereo displays
Development of VR
  hardware, software,
  tools and techniques

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Development of VR hardware, software, tools and techniques

Artists organize projects, help visualize data, create media
Artists are supported and get the toys to do their own work: often inspired by science
Scientists get to communicate effectively
EVL makes them look good
EVL delivers visualization technology and techniques to science

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mid-70s — *the Electronic Visualization Events* a series of live performances in which images were computer generated and color processed in real time with musical accompaniment

EVL helped to produce the CG special effects for the first Star Wars film

https://www.youtube.com/watch?v=2aLOAjTISEs

https://chicagotonight.wttw.com/2013/05/23/star-wars-connection

CAVE® 1992

ImmersaDesk® 1995

Paris 1998

GeoWall — 2000

Varrier

CAVE2 — 2012

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Molecular Chemistry Dataset

Particle Dreams in Spherical Harmonics

3D Brain MRI Data

Mars Surface

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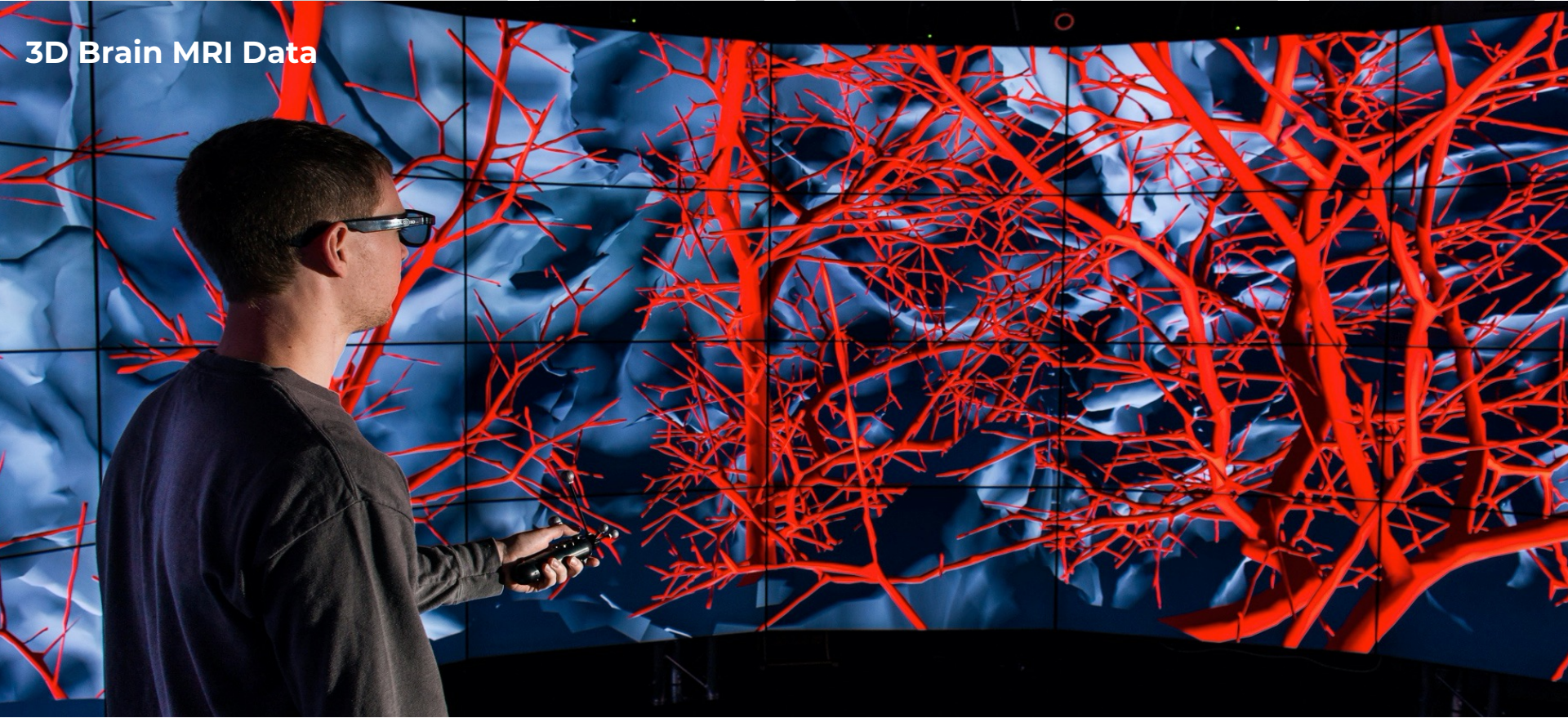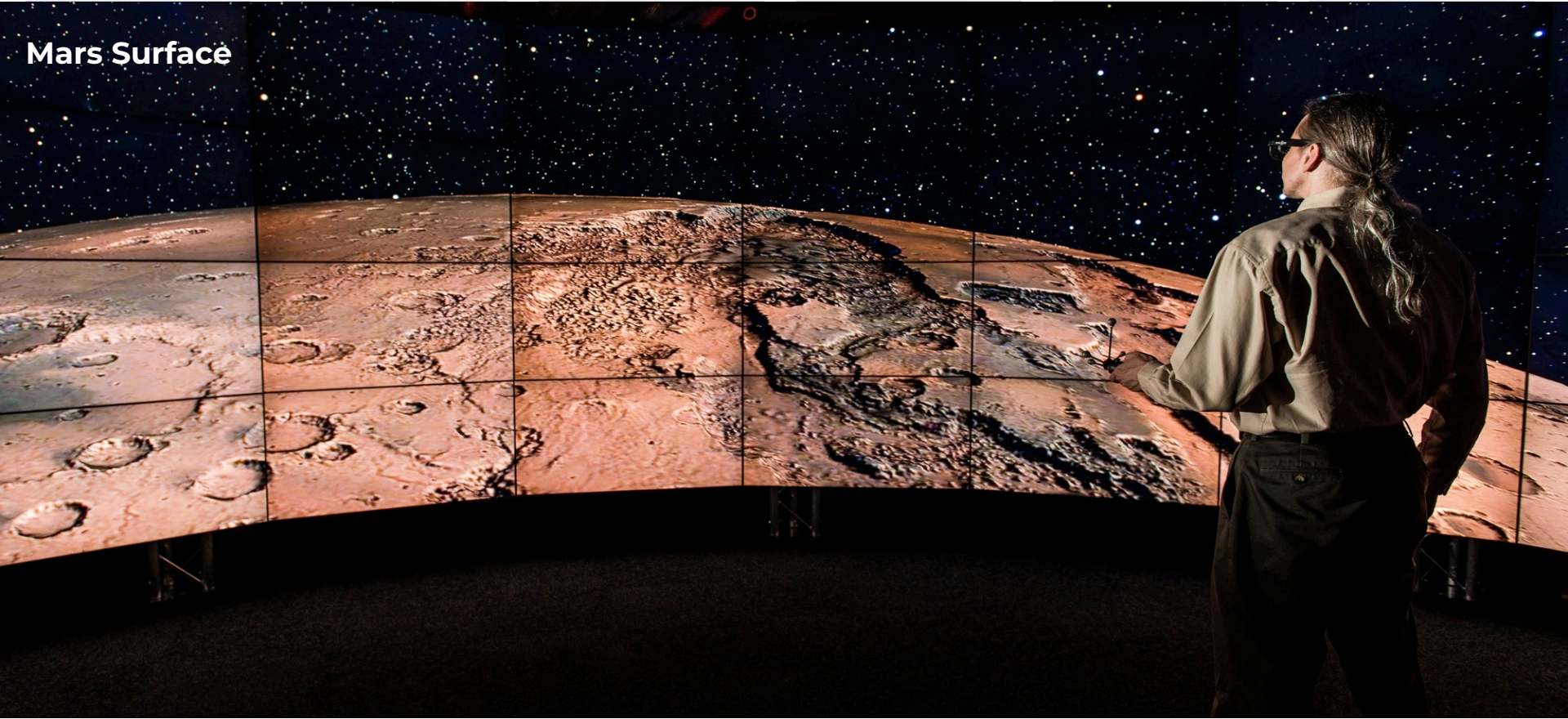
Fleet Commander — CyberCommons

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Paint Program — CyberCommons
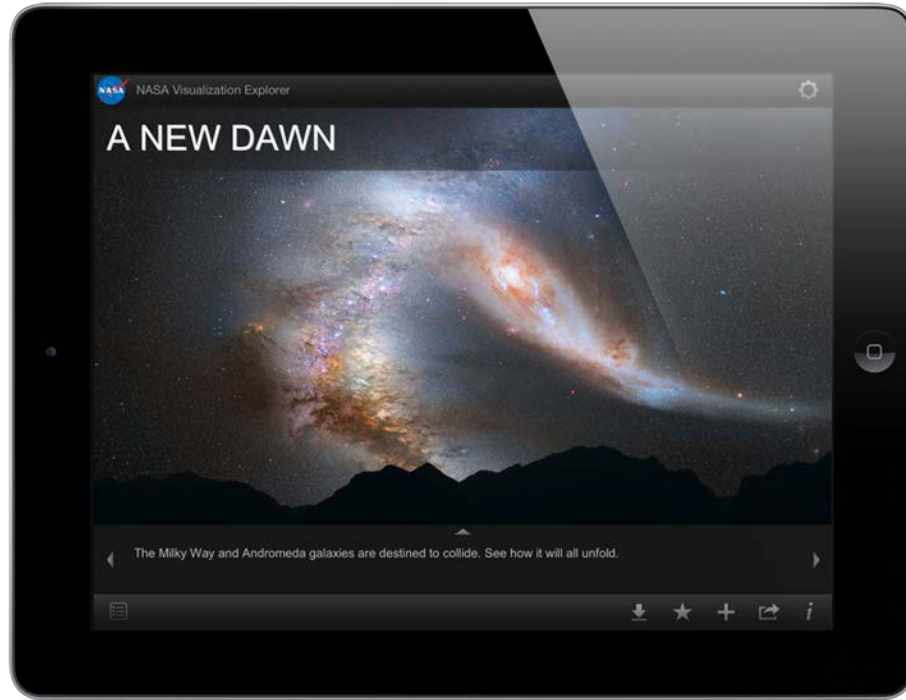
Free NASA iPad app

Developed for the general public

Releases 2 data-viz stories per week

Scientific Storytelling effort from NASA/GSFC

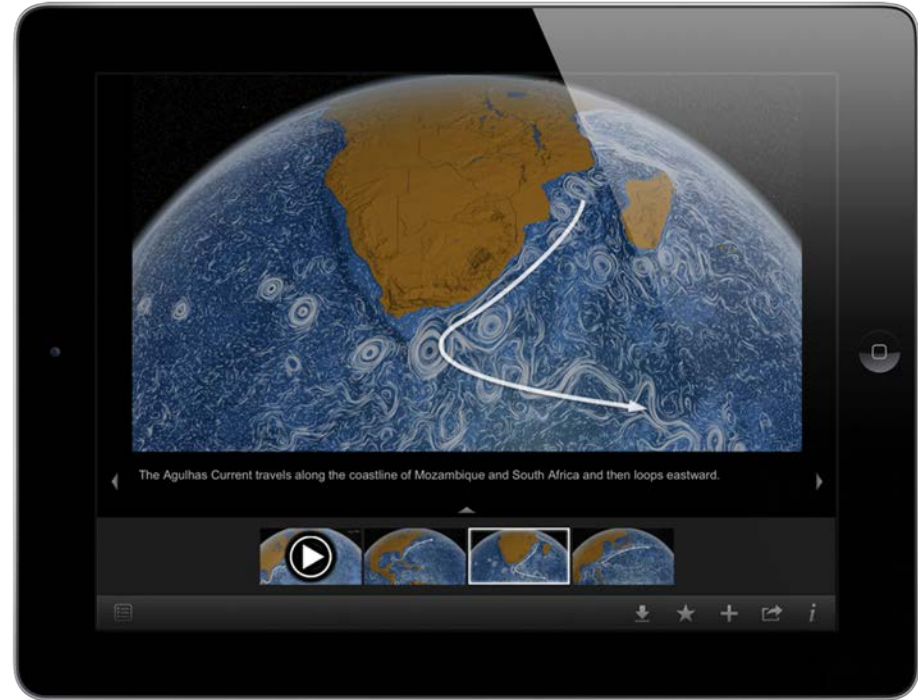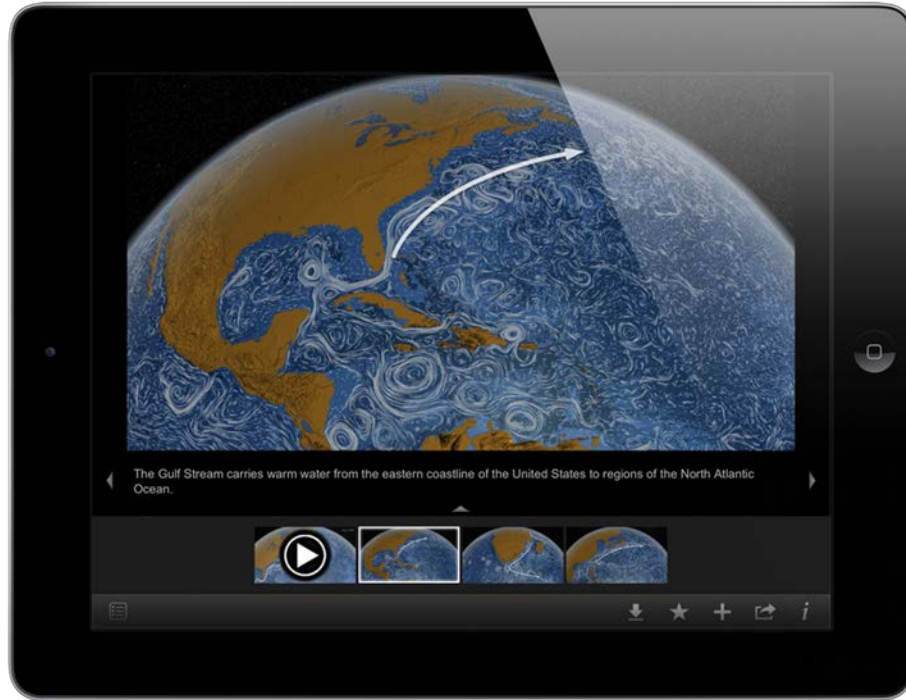**Covers all NASA science themes: Earth, Planets, Sun, Universe**

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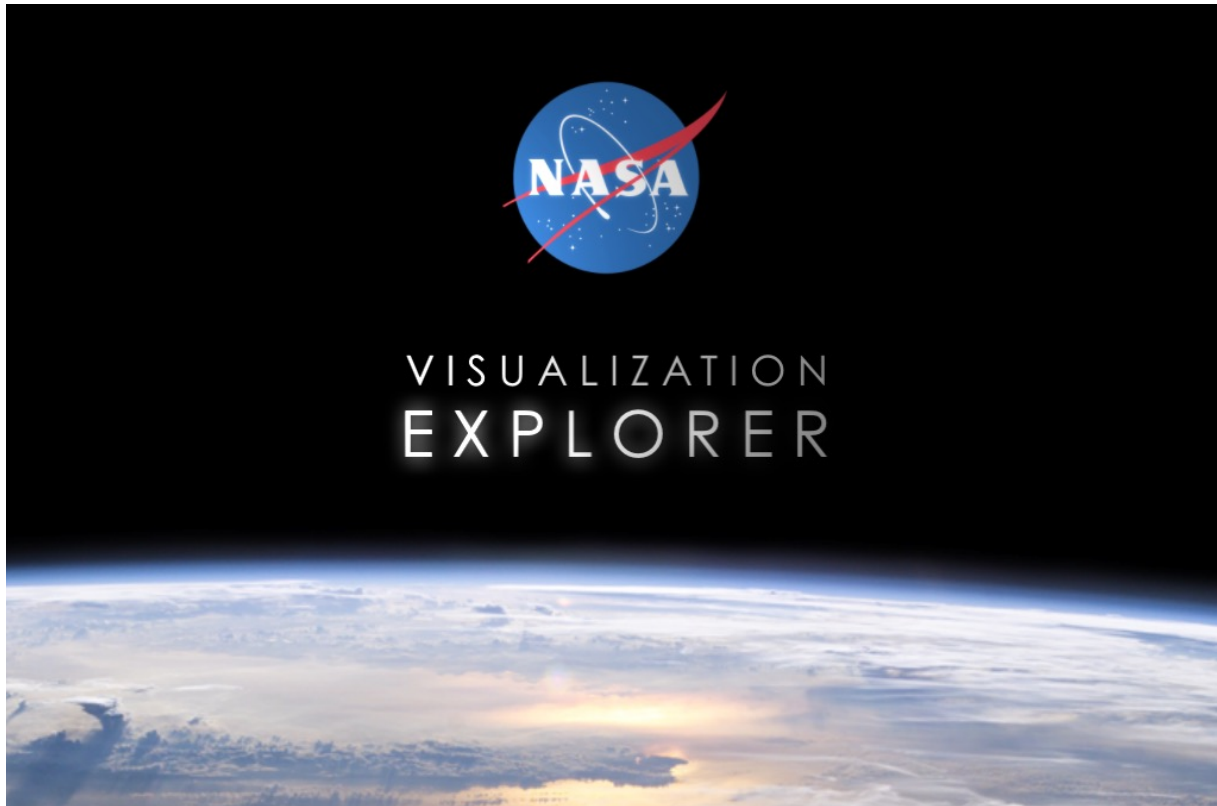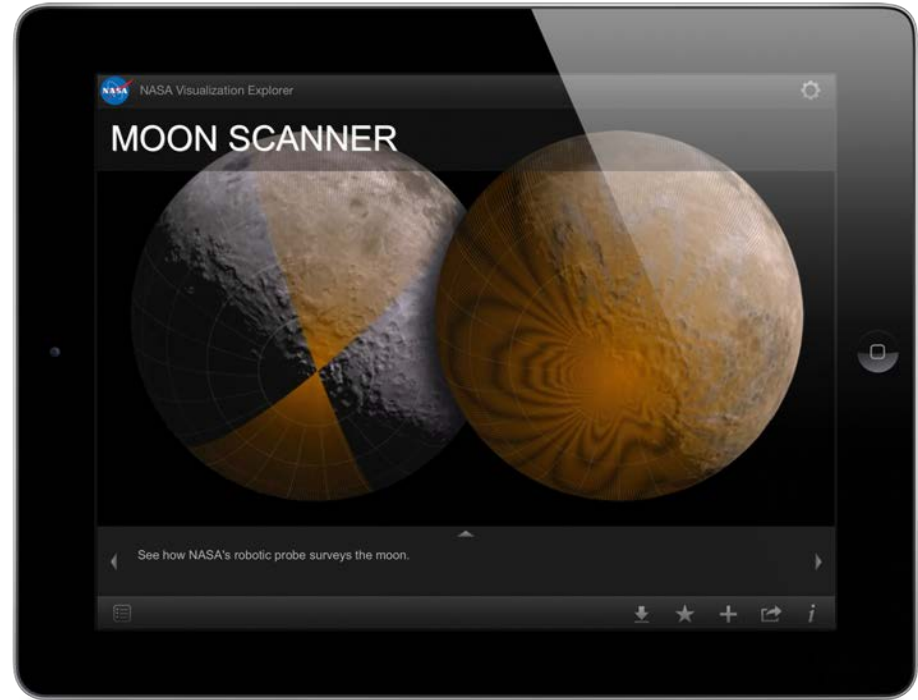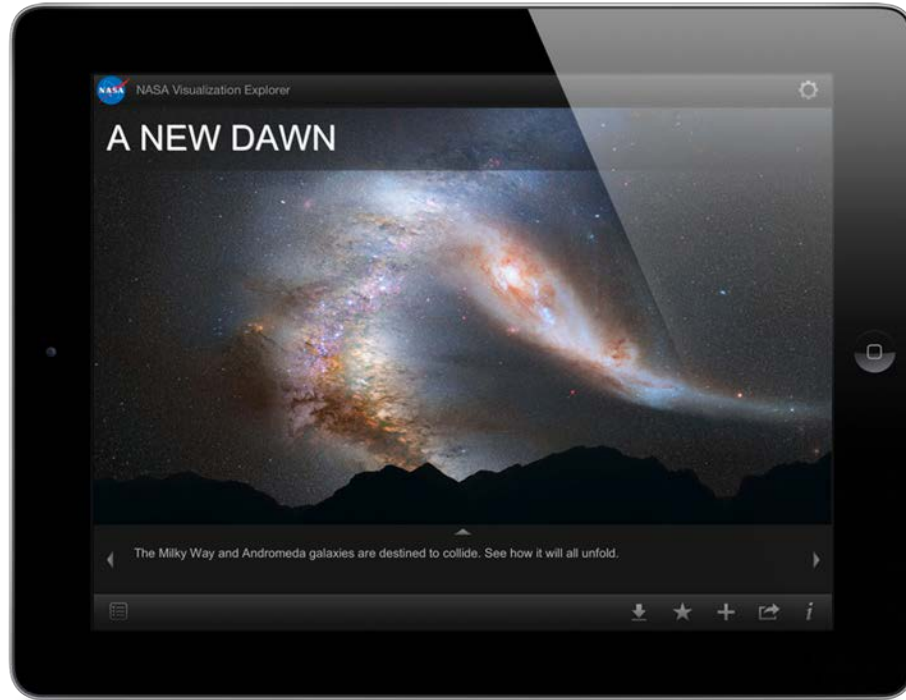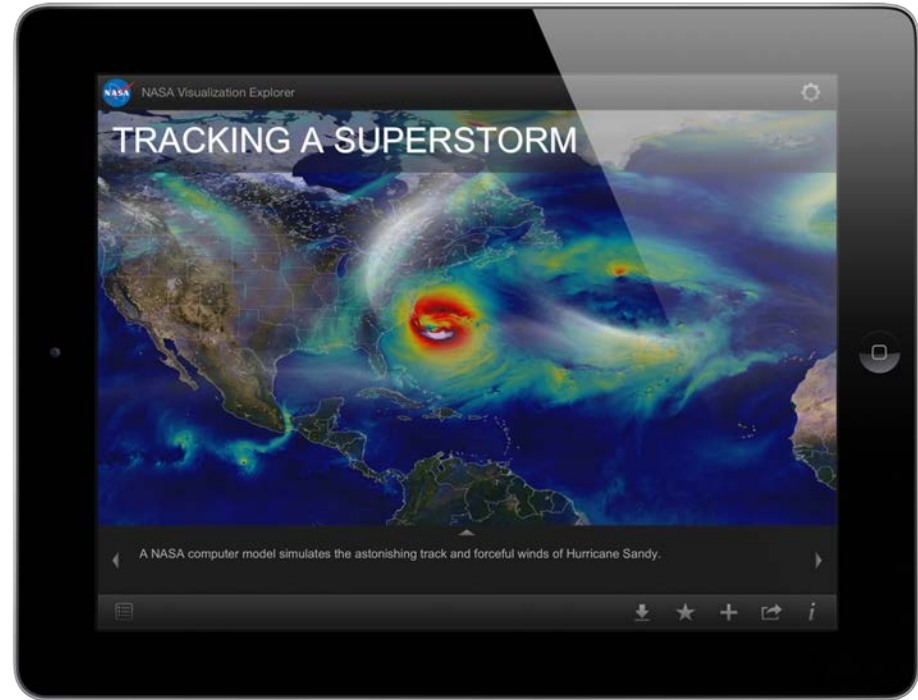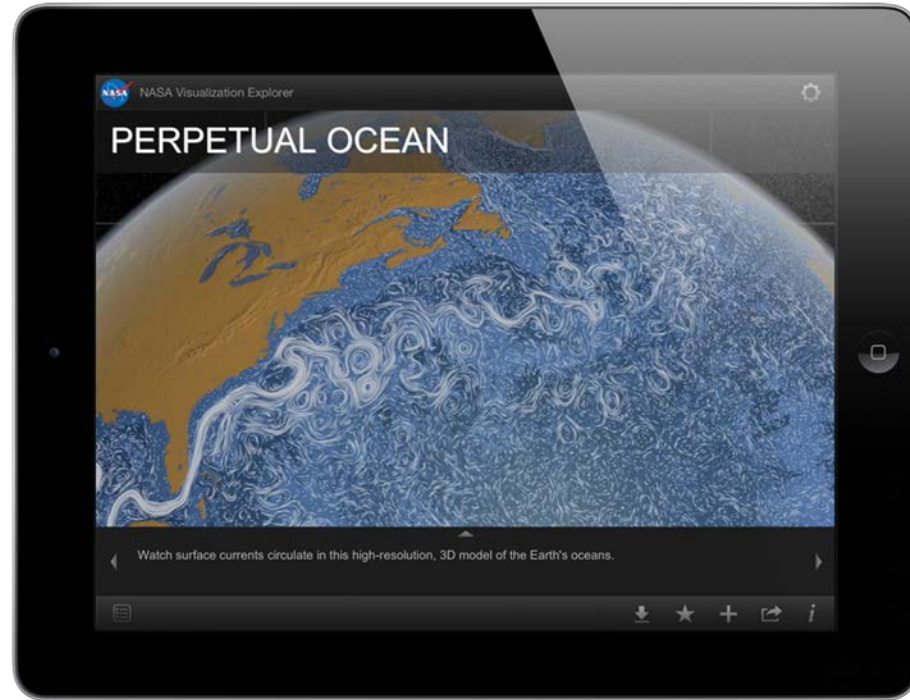
Let's get started.

Assignments Week 1

A1 – Market and UX Research and analyses
website/ week 1   Submit to Drive / A 1 folder

Introduction slides
Submit to Drive / Introductions