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# Mobile App Design Intro

Daria Tsoupikova



## **1-2pm**

Introduction – class goals and overview – syllabus and schedule

Introduction to EVL

Student Data Sheet

## **2.30-3.30pm**

Client Presentation / Q & A

Julie Chu

**Professor of Anthropology, University of Chicago**

Director, Global Ethnographic Media and Anthropology Research Group

## **3.30-4.30pm**

Introductions and Portfolio Presentations

## **4.30-5.30pm**

Team formation and discussion



## Mondays

1-6.40pm

2068 Electronic Visualization  
Laboratory (EVL)

Engineering Research  
Facility (EFR)

842 W Taylor St

3036 3<sup>rd</sup> Floor

2068 Cyber-Commons

Alternative:

Zoom



## 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.





## 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
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- research
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## 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 OS 10.13.6+  
2016+  
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](http://www.evl.uic.edu/mad/schedule.html)
- Zoom( class meetings) Design420!
- Blackboard (“Bb”) (announcements, grades, discussion boards)
- Mural (sketches, ideation, drawings)
- Google Drive( class folder with all the files)
- Google Docs (editable documents) for our projects, discussions and collaboration with clients
- Github (collaborative development)

## Electronic Communication Mantra

If it's an announcement, 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 Goodle Drive.

Mural – wireframes, sketches, ideation,

Marvel – interactive pencil simulation for user studies

Piazza+Slack (discussions)

## New tools

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

## 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

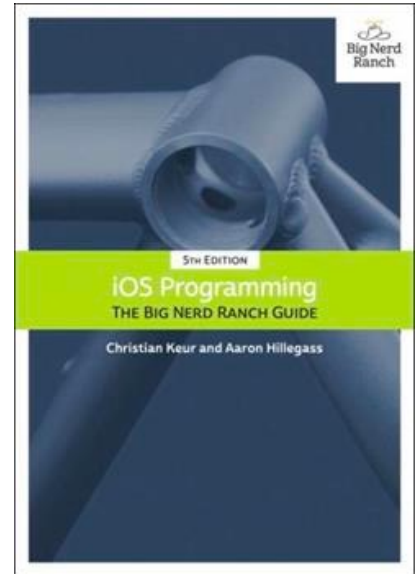
The Elements of User Experience: User-Centered Design for the Web  
by Jesse James Garrett

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 (40%)**

A5 icons,  
A8 Keyboard  
quiz 11, quiz 12  
peer evaluation

### **attendance & participation (10%)**

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 — UX and UI design

Week 3 — Labor Day

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



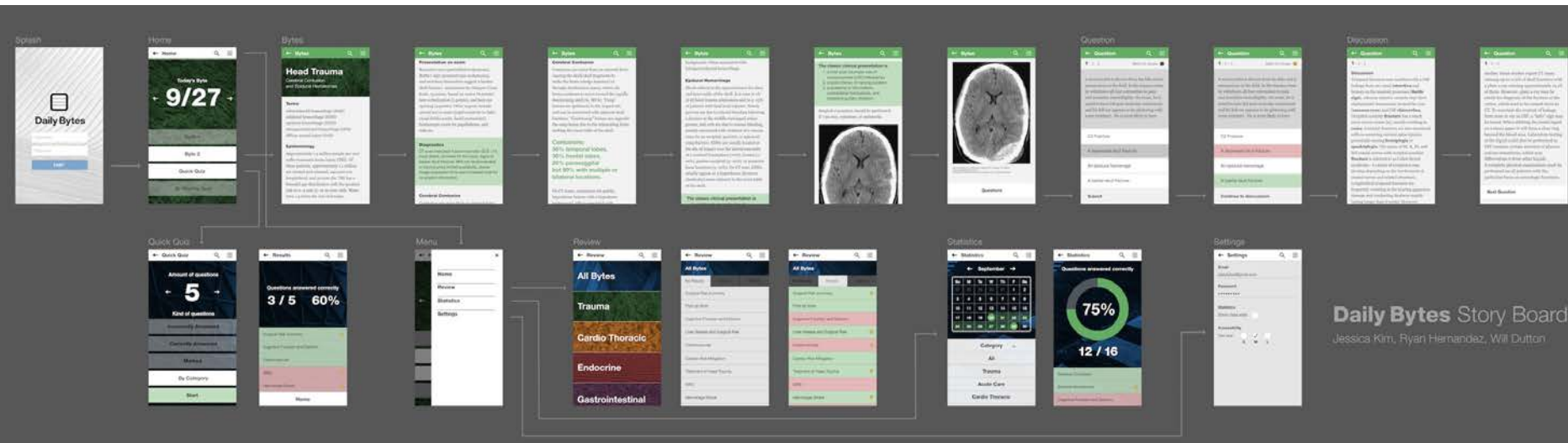
## Flow 2016

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 2017

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



# Abroad 2019

Serving students interested in studying abroad by providing information about available courses offered by international universities.

## Abroad

Yington Liu  
Yawen Lin  
Jiela Gan  
Jameisha Artis

The Abroad App is a mobile app that aims to serve students or parents who are interested in studying abroad by providing information about available courses offered by international universities.

### Colors



Loading Screen



Search

Search by Country

Search by Courses

Search by Schools

School Page



Drop-down Menu

Create an Account

Create an Account



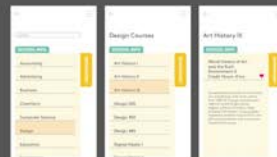
Facilities



Compare



Compare



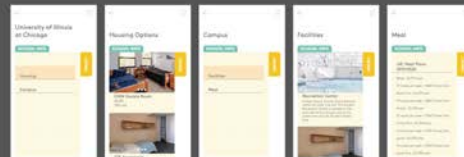
School Department

Department Course

Class Info



VISA



Living

Housing

Campus

Facilities

Meal



Application



Feedback

Submit Feedback



# Historic Green Ridge

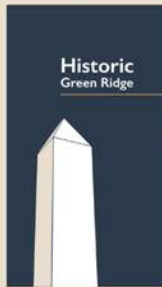
DeeDee Leng  
Kymia Robinson  
Jacob Sanchez

The Historic Green Ridge mobile app is a quick and convenient way to access the history of some of the most notable Kenoshan's buried in Green Ridge Cemetery. We aim to provide clear navigation throughout the app and it caters to people of all ages with accessibility in mind.

App Icon Colors



Splash Screen / Loading Screen



Splash Screen / Loading Screen



Information



QR Code Scanner



Plot Information / Small Text



Plot Information / Large Text



Plot Location



Search Notable Kenoshans



Search Monuments



Monument Information



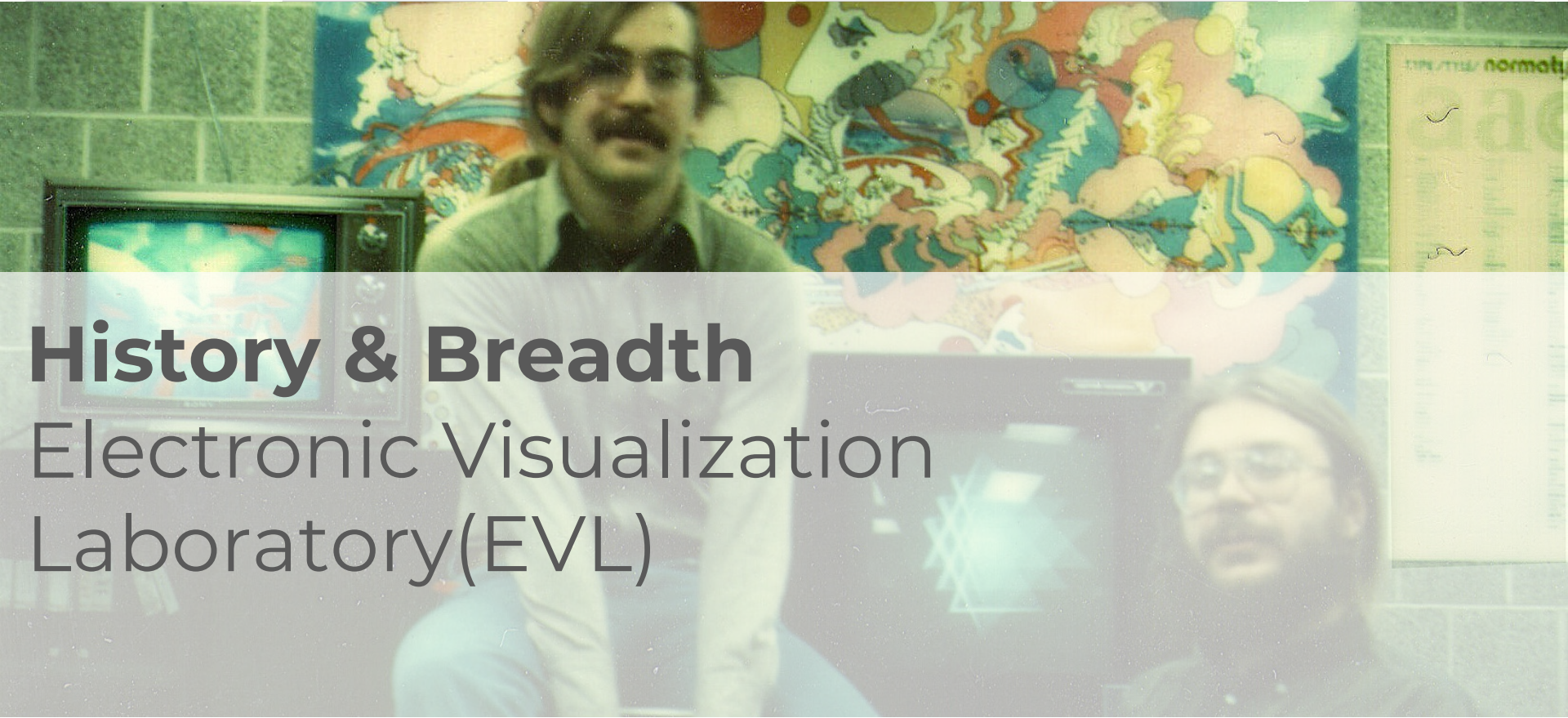
Map



## Willis 2020

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 information 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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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

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



# Molecular Chemistry Dataset



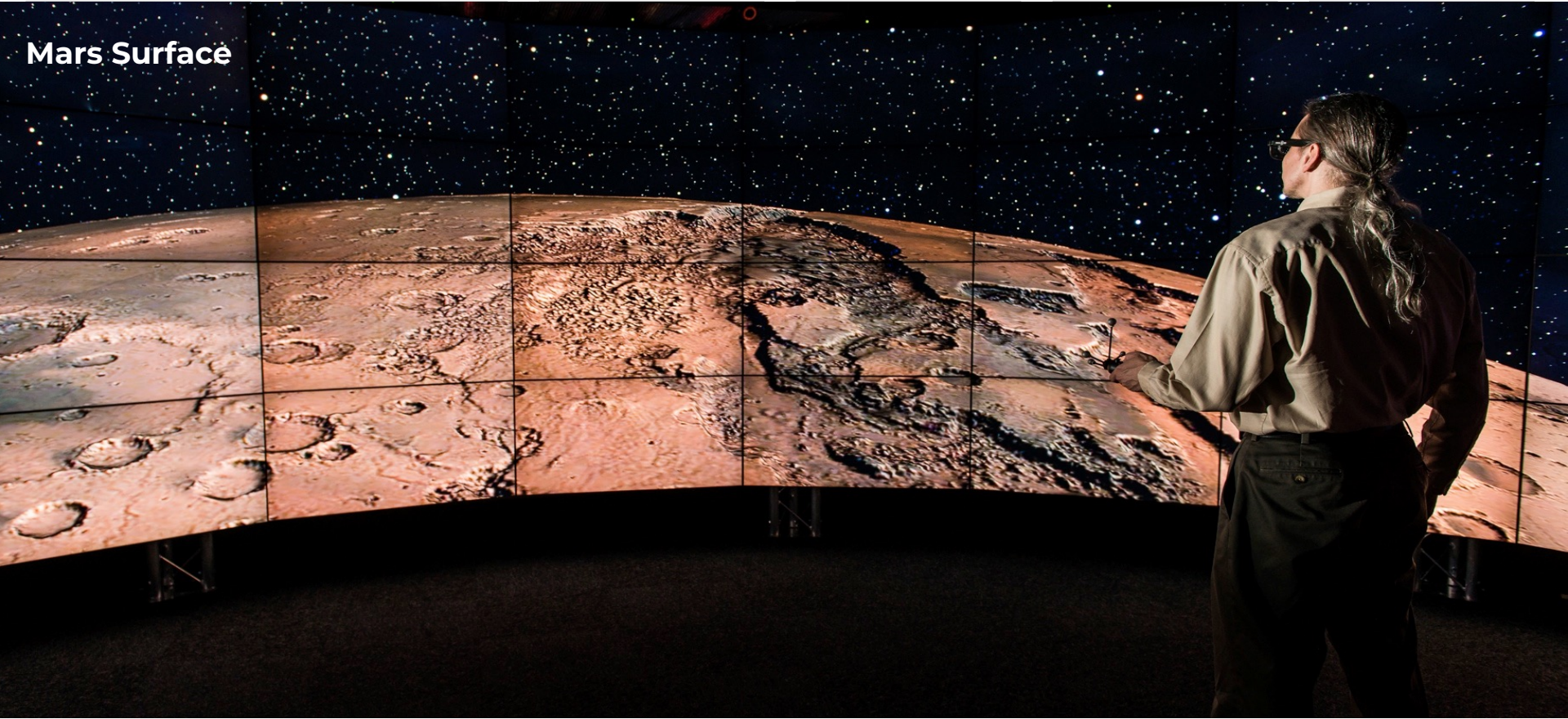
# Particle Dreams in Spherical Harmonics



## 3D Brain MRI Data



## Mars Surface



## Fleet Commander — CyberCommons



## Paint Program — CyberCommons



## Free NASA iPad app

Developed for the  
general public

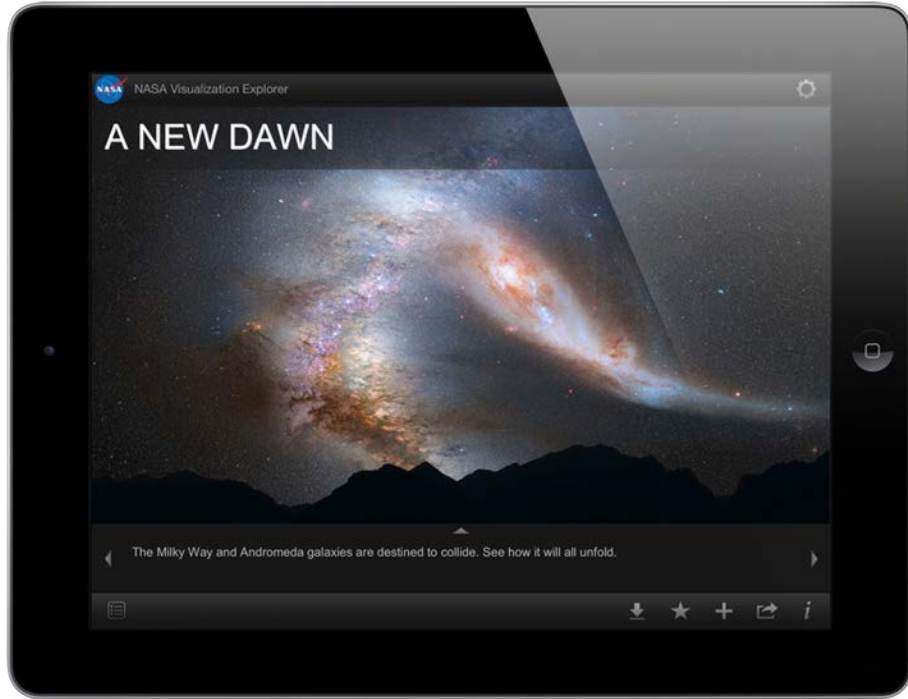
Releases 2 data-viz  
stories per week

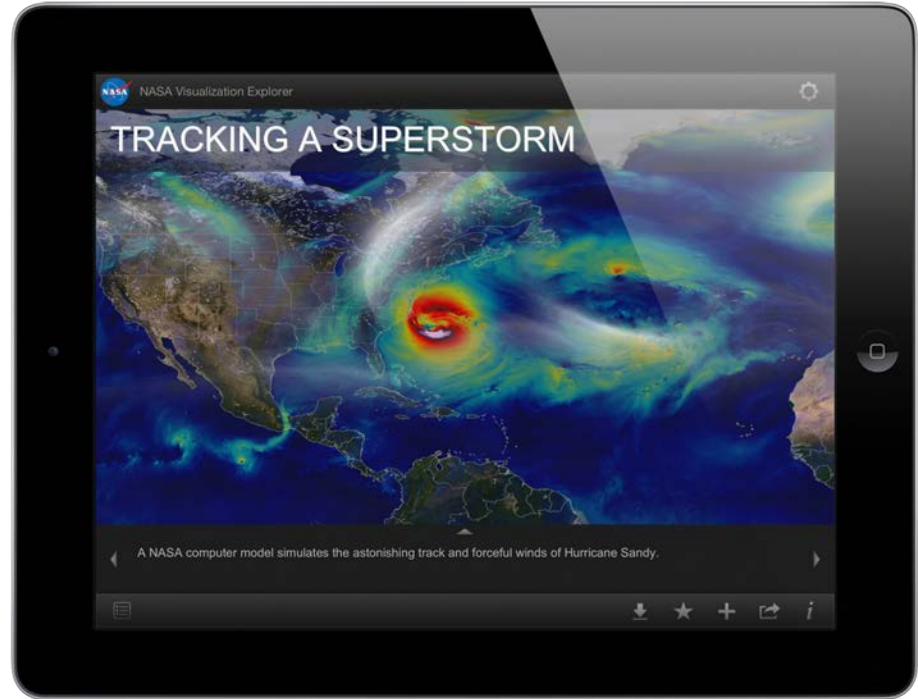
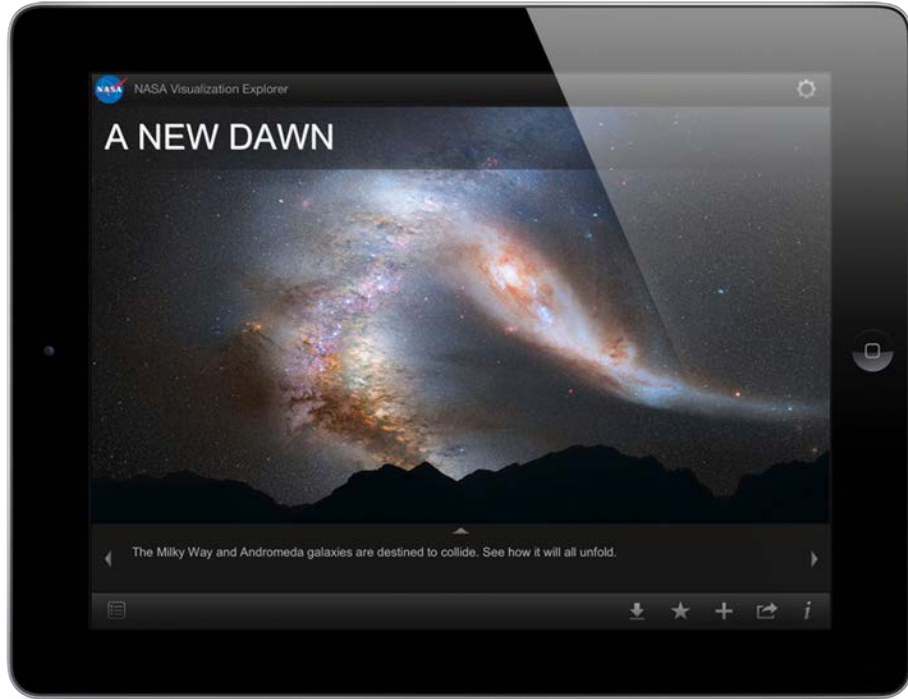
Scientific Storytelling  
effort from NASA/GSFC

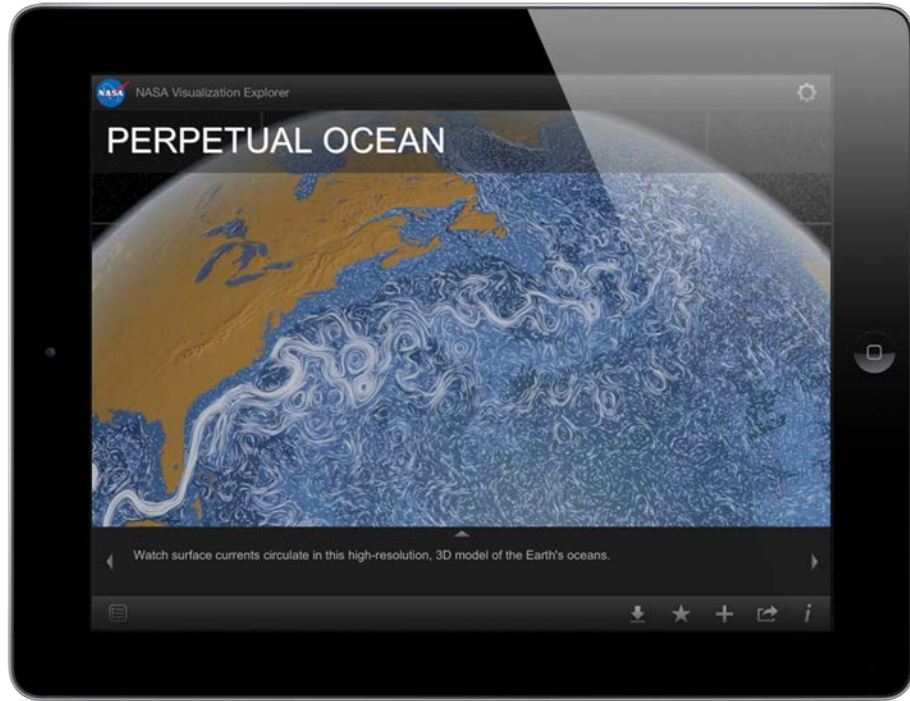
Covers all NASA science  
themes: Earth, Planets, Sun,  
Universe

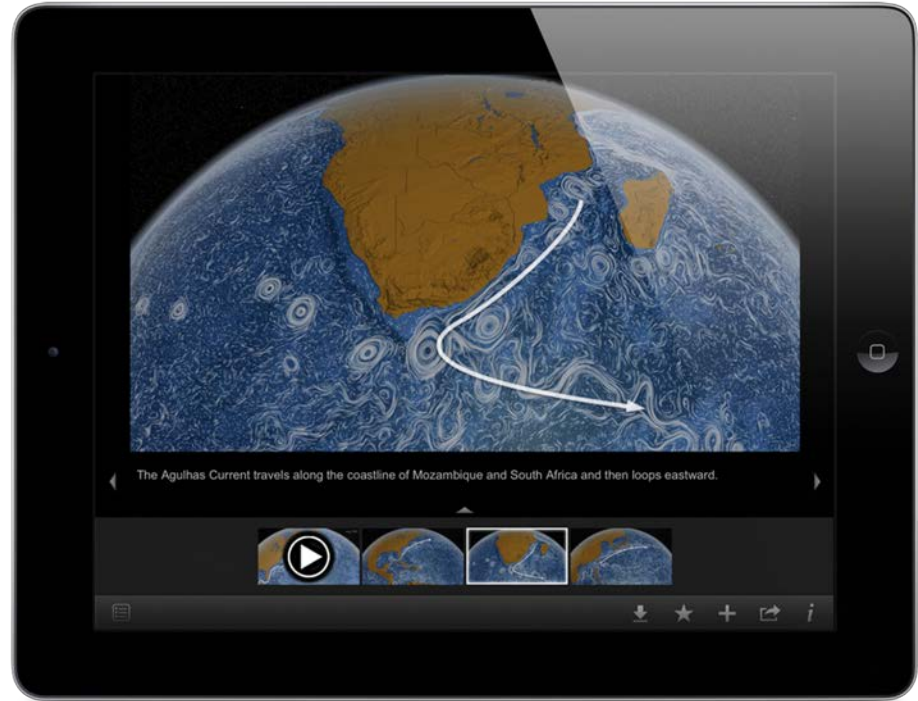
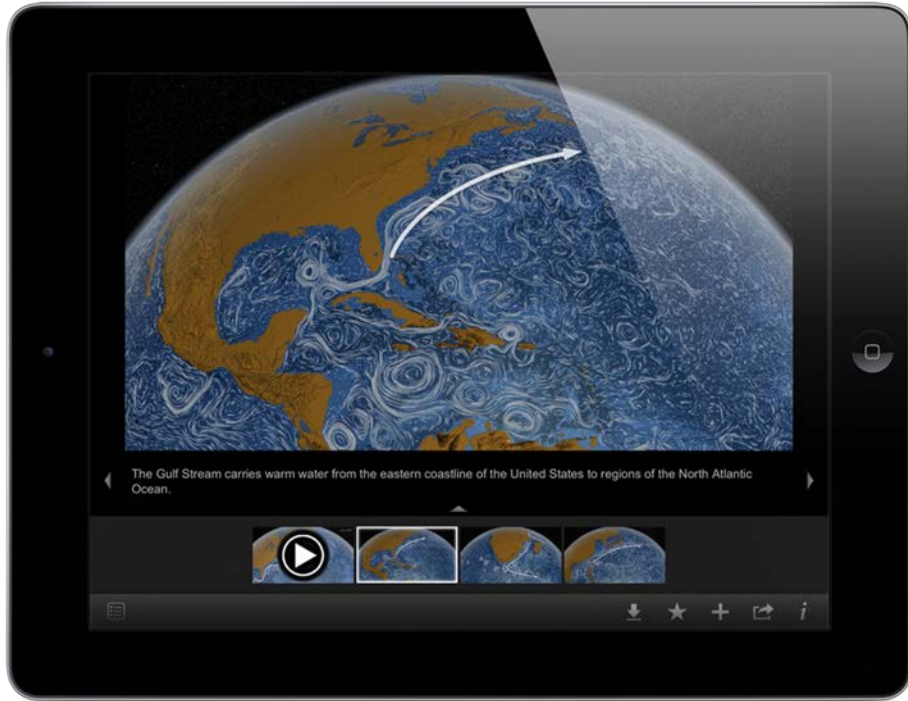














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# Let's get started.



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## Assignments Week 1

### **A1 – Market and UX Research and analyses**

website/ week1 Submit to Drive / A1 folder

### **Introduction slides**

Submit to Drive / Introductions