



PROJECT ROSTER

FALL 2017

Immersive Semi-Autonomous Aerial Command System

FALL & SPRING

Explore and envision new ways for human users to intuitively interface and collaborate with aerial drones around augmented reality (AR) technologies.



TEAM LEAD

Vedant Saran

ABOUT THE PROJECT

The ISAACS project envisions a new way to fly and control drones - with Augmented Reality. Using AR headsets, we can holographically project intuitive and contextualized 3D interfaces into the real-world. Done right, this can extend the operator's perception, allowing them to navigate fleets of drones through complex environments with little to no training.

Backed by Berkeley's Center for Augmented Cognition and Microsoft Research, Project ISAACS represents a new vision for not just AR, but Human-Robot Interaction as a whole.

We've laid the groundwork over previous semesters but there's still more to do. Join our team if you're interested in researching SLAM and safety assurance algorithms, designing new paradigms for Human-Robot Interaction, and/or writing applications for the Microsoft HoloLens.



AR Drone Control

TEAM ROLES

Computer Vision Researcher

Develop computer vision and control systems solutions, and deploy them onto drones. ROS and SLAM knowledge is a plus.

UX Designer

Design and test AR interfaces

Unity Developer

Responsible for building the interface and interactions in Unity.

OpenARK (Augmented Reality Kit)

FALL & SPRING

Creating fluid interfaces between humans and holograms



TEAM LEAD
Will Huang

ABOUT THE PROJECT

This project is an open-ended research project with the goal to create the first open source augmented reality development toolkit that can enable human computer interaction in 3D space on any AR platform. It integrates depth sensors, RGB camera, and transparent display glasses in a head-mounted platform to prototype the collection and display of information within an augmented reality system. Think of it as recreated Iron Man.TL;DR: Make Iron Man



TRANSPARENT
DISPLAY GLASSES

TEAM ROLES

Computer Vision Researcher

Using RGB-D point cloud information to create or improve various features in an AR glasses.
Qualification: C++

UX Designer

Responsible for providing design user study to provide guidance for creating the human computer interface



Mobile AR & Textbooks

FALL & SPRING

Exploring the rapid growth of mobile AR



TEAM LEAD

Bryan Tong

ABOUT THE PROJECT

Ever wished you could look at your favorite childhood novel or a confusing textbook and explore a 3D popout? AR Textbooks allows you and just a phone to bring it to life! Coupled with a Google Cardboard, you can view 3D details and animations in lifelike stereoscopic viewing. Last year, we expanded the platform to include a nostalgic book, real-time netcode, and annotation toggling. This semester, we're looking for creative developers to join us to explore and refine more in mobile AR!

TEAM ROLES



AR Textbook

Software Developer

Responsible for improving the existing prototype and implementing additional features
Qualifications: Experience with Unity (preferred), OpenCV or other Computer Vision libraries/SDKs (optional but a plus).

3D Artists

Responsible for creating the assets that will be utilized in our demo. Qualification: Maya or equivalent

Unity Developer

Responsible for implementing features and helping maintain stability in Unity updates.
Qualifications: Strong familiarity with Unity or C#,

ARKIT/iOS Developer

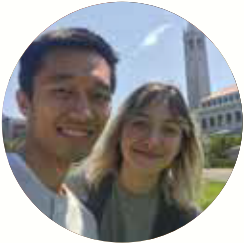
Interested in a more advanced mobile AR challenge? Explore even more functionality with ARKit! Qualifications: Own Mac + iOS device, familiarity with Swift / XCode



Immersive Cinema

FALL & SPRING

Exploring films for VR environments



TEAM LEADS

Stephanie Daffara
Howe Cui

ABOUT THE PROJECT

The Immersive Cinema team is looking for creative ways to tell stories through 360 film and animation. We are focused on actively creating content and researching the narrative properties of this new medium. Our goal is to facilitate creative expressions while simultaneously pushing members to explore new boundaries in scriptwriting, production, editing, and animation.



Immersive Cinema

TEAM ROLES

Animators

Responsible for animating, shading, lighting, etc. in 3d. Experience in any 3d graphics program is preferred, but we will be using Maya to animate and texture.

Editors

Responsible for editing 360 footage. Experience in any video editing software is preferred, but we will be using Adobe Premiere to edit content.

Cinematographers

Responsible for composing and filming scenes. Experience in filmography is preferred, but keep in mind that this is a radically different medium.

Photographers

Responsible for composing and taking pictures. Experience in photography is preferred, and background knowledge in Lightroom and photoshop is a plus.

Screenwriters

Responsible for writing scripts and/or documenting team progress and innovations.



Halloween VR Experience

FALL & SPRING

Haunted VR Experience



TEAM LEADS

Damini Grover

ABOUT THE PROJECT

Good VR acts like an emotion amplifier. This amplification is most easily demonstrated with horror. Last year our haunted boat ride demo scared parents and kids alike. Members on this team will work together to create a compelling horror game for the HTC Vive while learning how to use the Unity game engine and build 3D models in Maya. The team is expected to study the importance of the balance between amplifying horror and being responsible for the players. You are also expected to enjoy watching people scream and tremble at your demo on Halloween.



In Game Scenes

TEAM ROLES

Unity Developers

Implement game mechanics, components, and trigger events

3D Artists

Responsible for game art design and 3D contents modeling

