



PROJECT ROSTER

SPRING 2018

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 interface between humans and holograms



TEAM LEAD

Will Huang
Bill Zhou

ABOUT THE PROJECT

This project is an open-ended research project with a 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

Walt Leung

ABOUT THE PROJECT

The Mobile AR & Textbooks team was created to apply the newest developments in mobile AR to different industry verticals. We are always looking for real-world problems to solve using creative mobile AR solutions, with a particular focus on education. Last year, we were able to bring a childhood novel to life with real-time net-code and annotation toggling. This semester, we will be working with the Innovative Genomics Institute to help visualize CRISPR genome editing technology. Join our team if you're passionate about educational software, have an affinity for genomics research, or simply interested in mobile augmented reality!

TEAM ROLES

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

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#,



AR Textbook



Immersive Cinema

FALL & SPRING

Exploring films in VR environment



TEAM LEADS

Stephanie Daffara
Kris Hsu

ABOUT THE PROJECT

The Immersive Cinema team is creating ways to tell stories through 360 film. 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.



Immersive Film

TEAM ROLES

Filmmaker

Responsible for writing scripts, composing and filming scenes, and editing 360 footage. Experience in these areas is a plus.

Editors

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

Creative Researcher

Doing research on 360 filming, UX, latest standards in 360 film, market research, equipment research, and alternative application for 360 content.



Landships

FALL & SPRING

A futuristic competitive vehicular-combat multiplayer game for HTC Vive



TEAM LEAD

Ross Luo
Oscar Dorado

ABOUT THE PROJECT

Our objective is to explore the exciting potential of multiplayer game development in virtual reality. We're using the Unity 3D engine to create Landships, a multiplayer tank combat simulator. Players will take on the various roles of a tank crew, with one driver, one shooter, one loader, and one spotter, and work together to battle enemy tanks controlled by other teams or AI. Can VR deliver an immersive enough experience to simulate this kind of cooperative team play?



Landships

TEAM ROLES

Software Developer

Experienced in working with Unity. Preferably strong at C#.

Game Developer

Design and plan features and gameplay of Landships, and build it using Unity 3D.

3D Modelers

Create assets that will be used in Landships. Experience with Maya or equivalent required.

UI/UX Designers

Work to create as enjoyable and intuitive an experience as possible. Requires creativity and experimentation to solve UI/UX problems in VR.



Immersive Animation

FALL & SPRING

Creating compelling animated stories



TEAM LEADS

**Madi Hight
Howe Cui**

ABOUT THE PROJECT

Are you a fan of animated films? Our team expands student films from traditional 3D into 360 VR. This semester we are focused on camera work and lighting in order to deliver a final polished product, but we are looking for a diverse range skillsets. Apply for the Immersive Animation team and be a part of cutting-edge VR research!



In Game Scenes

TEAM ROLES

3D Artists

Responsible for editing footage and sound.

Cinematographers

Responsible for placing and directing cameras in 360.

Lighting Artists

Responsible for placing and manipulating lights in 360.

2D Texture Artists

Responsible for painting backgrounds and textures for animated scenes.

3D Modeling Artists

Responsible for creating new and updating old assets.



Windows Mixed Reality Dream Team

FALL & SPRING

Exploring new possibilities with the mixed reality paradigm



TEAM LEAD

Damani Grover

ABOUT THE PROJECT

With the addition of two Windows MR headsets to the VR@B arsenal, our team is looking to update and port existing projects such as Virtual Campanile to the Windows Store. We are accepting applications from enthusiastic students with previous Unity, 3D modeling, VR development, or Hololens experience.



MR Headset

TEAM ROLES

Unity Developer

Responsible for handling Unity scenes and updating interfaces and game mechanics as

3D Artist

Responsible for modeling/updating assets in Maya or Blender.

Fire Extinguisher

This is brand-new hardware, and we need quick-thinking students that can help their teammates navigate the uncertainty. Previous VR/AR development experience is a must, and Hololens development experience is a huge plus.



VR@B Outreach

FALL & SPRING

Pushing service beyond the UC Berkeley community



TEAM LEAD

Madi Hight

ABOUT THE PROJECT

Virtual Reality at Berkeley's Outreach Team is dedicated to improving access to VR in the community and promoting events like hackathons, demos, and speaker series.

We are looking for anyone interested in volunteering for and planning outreach. One of our current projects is VR@BPL, where members hold weekly demos and open hours at the Berkeley Public Library for the community. For most of the visitors, it is their first time getting to experience VR and the only opportunity they have to regularly play around with the technology.



Commujity Service

TEAM ROLES

Design Committee

Responsible for creating promotional material for events or partnering with designers from our partner organizations.

Volunteer Committee

Helps set up, demo, and take down equipment for events. There will be lots of chances to network or just hang out with other VR enthusiasts.

