Foreword
The Capstone course represents the conclusion of the HCI/d professional Master’s program at Indiana University School of Informatics and Computing.

Students pursue their own independent project, scaffolded by the course, their peers, and the faculty. The Capstone is each student’s opportunity to show themselves, their peers, and potential employers what they can do. This collection of 41 projects is part of the culmination of their efforts.

Students choose from one of four types of projects: Interaction design, user research for design, service design, or academic research. Methods overlap considerably across all four. The final deliverable determines which type a student has completed.

Interaction Design culminates in the development, proposal, and evaluation of an interactive product. Along with other process documentation, students deliver an interactive prototype.

User Research for Design emphasizes user experience research, including the design and execution of one or more user studies, data analysis, and synthesis in the forms of implications for design and ten design concepts informed by the results.

Service Design culminates in the development and proposal of a service, which is an organized system that provides for or accommodates a need and may contain many products. Along with other process documentation, students deliver service and experience maps.

Academic Research culminates in a novel scientific contribution expressed in a publishable paper. It should have a rigorous literature review, study design, presentation of results, and well considered implications for the research community.

Capstone Advisors
Jeffrey Bardzell, Associate Professor, Instructor of Record
Shaowen Bardzell, Associate Professor, Instructor of Record
Jordan Beck, Associate Instructor
Gopinaath Kannabiran, Associate Instructor

HCI/d Core Faculty
Eli Belvis, Professor of Informatics
Hamid Ekbia, Professor of Informatics
Martin A. Siegel, Professor of Informatics
Erik Stolterman, Professor of Informatics
Norman Makoto Su, Assistant Professor of Informatics
**Projects**

- Talk To Me
- Smart House Manager
- Parental Assistance Technology
- Focus App
- Gallery Follow-up
- Pansa Smart Healthcare Kit
- Gami-Frustration
- Usversity
- User Research for Learning Experience
- ReqEOD
- Civil War Journeys
- My Books
- Challenging the Taboo of Menstruation
- Just.Make
- Designer+
- On-Campus Parking Assistant
- KeepItAlive
- CityExplorer
- Community Crit
- 3RD - A Drone Pilot Online Marketplace
- Nomify
- Inspiring Micro-NGO’s with Design Research
- Better Sleep
- A Safer Place to Date
- Tiny Adventures
- Reimagining In-Car UX
- Coachly
- Fempower
- Votely
- Merging Realities
- WoW
- Virtual Reality and Empathy
- Serendipity
- Stand-up Comedy Connection
- Together
- Editor
- Texting in Intimate Relationships
- Doll Maker
- Touch Your Travel Memories
- Beat Procrastination
- ONE

**Designers**

- Prafulla Badeanahalli
- Shankar Balasubramanian
- Rachel Banks
- Matthew Bloom-Carlin
- Shaohong Cai
- Ziyng Cai
- Joshua Champion
- Liang Chen
- Shu-Chuan Chiu
- Raphael Feinstein
- Kevin Flick
- Daniela Gobbo
- Nicole Guernsey
- Shengfan He
- Jiaqi Li
- Yangguang Li
- Jiaxing Liang
- Mochen Liu
- Kevin Logan
- Zhoucheng Liu
- Jereme Magsaysay
- Micah Nethery
- Yi Nie
- Derek Parker
- Amanda Peterson
- Adhithya Ramakumar
- Karthik Sudhindra Rao
- Prianka Rayamajhi
- Tori Rice
- Daniel Rudzinski
- Zhijian Shi
- Sarah Skertic
- Evan Tank
- Scott Trepper
- Peipei Wang
- Yi Wang
- Stephanie Wethington
- Jianping Wu
- Ji Zhao
- Shuai Zhao
- Xiaoyuan Zhu

**Capstone Type**

- Interaction Design
- Interaction Design
- Interaction Design
- Interaction Design
- Interaction Design
- Interaction Design
- User Research for Design
- Interaction Design
- User Research for Design
- Interaction Design
- Interaction Design
- Service Design
- Interaction Design
- Interaction Design
- Interaction Design
- Service Design
- Interaction Design
- User Research for Design
- Interaction Design
- User Research for Design
- Interaction Design
- Interaction Design
- User Research for Design
- Interaction Design
- Interaction Design
- Interaction Design
Hello!
How are you?
Project
There are lots of ways to initiate a conversation but not many ways to sustain them. “Talk to me” is one possible solution to this problem.

Prafulla Badeanahalli
I collaborate with people and designers to identify and solve problems.
Carpet cleaning schedule
They can be here on Saturday, 10 am or 2 pm. What works best for you?
Good design empowers people.

Smart house manager

Project
This project focuses on creating a smart, proactive digital home assistant. It acts like a house manager to help the people living in the house stay organized.

Shankar B.
Good design empowers people.
When it comes to snacks, charcuterie paired with wine is my favorite.

**Rachel Banks**

When it comes to snacks, charcuterie paired with wine is my favorite.
Well, hello there.

I hope you haven't been wasting your time again. Remember, power doesn't sleep in.

Let's try doing the pomodoro method. It can be a powerful way to increase your productivity.
Project
Through conversational interactions the user is able to discover activity modules where they can train their mind for improved focus. To explore tone for the interactions, I relied on three different characters.

Matt Bloom-Carlin
I design stuff. It’s fun. I like it.
Shaohong Cai

**Project**
A new responsive web application that helps artwork sales or gallery owners better follow up with the customers in order to re-engage after they leave galleries.

**Shaohong Cai**
Designers help people have a nice dream, then change reality upon waking.
Transform the frustrating illness into positive and even productive

CHANGING ATTITUDES TOWARDS BEING UNHEALTHY

1. COMBINING

WALKING STICK & MINI VACUUM

What if mobility problem can bring more than suffering? The concept of Pansa Walking stick is to obtain a positive association through people’s daily movement, which can increase the dignity and mental wellbeing of the patient.

2. COMBINING

PILL CASE & SMART GARDENING

What if your medicine intake is no longer just something routine and tedious but become more fun and meaningful? The Pansa smart plant is an automated hydroponic unit. It determines the time for watering based on patient's pill intake status.

3. MONITORING & COLLECTING

PATIENT’S DATA IN ONE PLACE

All the smart healthcare kit can be utilized as a medium for healthcare stuff to seamlessly collect and monitor patient's activities, which help patient articulate their situation clearly and achieve better doctor-patient communication.
My capstone is a full exploration to create positive association between illness and patient’s activity. It helps increase mental wellbeing of patients and achieve better doctor-patient communication.

Ziying Cai
I enjoy harnessing the power of design to make the world more fun to live with.
Reflection

- a: surveys
- b: interviews
- c: story sharing
- d: keyword analysis
- e: category comparison
- f: body language analysis

Deliverable Creation
A universal tutorial cannot be designed

Motivation for success has varying limits

Body language is a good indicator for these limits

Failure does not inherently cause breakdowns

Gami-Frustration:
A failure of tutorial transitions into actual gameplay

Project
Current tutorials often leave new gamers frustrated, following the transition to actual gameplay. What causes these frustrations and the resulting breakdowns and attrition? How can we remedy these situations?

Joshua Champion
I am a designer looking to work directly with users to make more enjoyable experiences
Liang Chen

I am an interaction and product designer with empathy and passion.

Project
This project gives prospective students a virtual experience of their target university schools using VR technology.

Usversity
User Research for Learning Experience Design

Project
The project focuses on the student-professor journey in doing final projects. It proposes a service design workshop and several other design concepts based on insights from contextual inquiries & other methods.

Shu-chuan Chiu
UX researcher and strategist who cares about end-to-end experience journeys
Traveling Carnival

Today, March 25

Tomorrow, March 26

Buy on Website

Tap In

Events Log

1103 Park Ave. Burlington, IN

Tap In

8:52 AM

Tap In

9:10 PM

Tap Out

Ingress Log

Tap Out

Last Tapped In at 8:50 AM

Additional Information:
- 2 drink minimum to play. All food is 15% off.
- The winners will receive a $25 gift certificate per person on their team.
- No phones or computers are allowed during game play, otherwise you will be disqualified.

Additional Information:
- $10 per ticket
- Additional information: 2 drink minimum to play. All food is 15% off. The winners will receive a $25 gift certificate per person on their team. No phones or computers are allowed during game play, otherwise you will be disqualified.
Your actions, thoughts and feelings are at the center of every designed interaction.

**Project**

Young traveling consultants work long hours, deteriorating their work-life balance. Using a tap in and tap out process, they can help advocate for their own personal time and enforce their work boundaries.

**Raphael Feinstein**

Your actions, thoughts and feelings are at the center of every designed interaction.
Project

Civil War Journeys provides historical context to original documents from the American Civil War, while leveraging a crowdsourcing community for authoring digitized historical documents.

Kevin Flick

I am an intuitive yet analytical, visionary, and insightful designer.
Daniela Gobbo
I am a Brazilian designer who believes in the power of questions and constraints.

My Books

“The school doesn’t have a lot of books for the kids, so when they have to read a book for class, they have to return it to the library after two days so another kid can borrow it”

- Public School teacher

Project

My Books is a website that provides public school children in Brazil with free public domain books. It aims to encourage reading and learning through an engaging platform.
Nicole Guernsey
Friendly, inventive, and thoughtful. Always challenging what is to see what could be.

Challenging the Taboo of Menstruation

Project
Challenging the taboos of menstruation and bringing awareness to closely-related social issues. Why can’t we talk about something that half the population experiences every month?

“It was never talked about in my home, even though I have two sisters. I thought I was dying during my first one because no one had ever talked about it.”

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Just Make
A tool and platform for makers to share their making process to the community easier.
Shengfan He
Project
This project tries to explore a new way for makers or DIYers to share their making process. By doing so, they contribute, shape, and learn from each other through their communities easier.

Shengfan He
I am a curious designer who enjoys creative thinking and problem solving.
I am a designer who cares about service design, entrepreneurship and life-long learning.

Designer+ is a mentorship platform for helping junior designers find experienced mentors. During a project mentorship, Designer+ helps mentees to design, refine their skills, and evolve as experts.

Jack Li
I am a UX engineer. I love to bring design into life by prototyping.

**Project**

This digital system aims to assist drivers find parking spaces in a university campus. Users can find information on parking permits, signs, and available slots using this design.

**Yangguang Li**

I am a UX engineer. I love to bring design into life by prototyping.
I design with physical materials to create delightful interactive experiences.

**Project**
Prompting office workers to move more in open office space using a collaborative gaming installation.

**Jiaxin Liang**
I design with physical materials to create delightful interactive experiences.
CityExplorer

Project
Helping travelers who enjoy exploring cities to find more interesting places that they may love! Also, let them share what they encountered and their stories within the community.

Mochen Liu
Passionate about UX design. Let’s make the world a better place together!
Kevin Logan

Project
Community Crit is an online platform to help designers receive high quality feedback fast. The service’s goal is to allow designers to document their design process in a manner that allows it to be easily critiqued.

Kevin Logan
I am a lifelong learner who loves to mentor others. Design is love, design is life.
An easy way to hire drone pilots for your service

WHAT WE DO

Aerial Photography & Videography

Professional and licenced pilots and photographers

Ready for capture important moment in your life

HOW IT WORKS

1. Follow our process to create a new case easily, or search for some existing successful cases.

2. Read reviews, watch videos & compare bid prices to help you choose the pilot that is best for your needs.

3. Review your pilot’s work and pay them using our secure payment platform with your debit or credit card.
Zhouxing Lu

I believe that design is transforming the chaotic into the organized.

Project
What I’m designing is a drone pilot online marketplace for normal customers to hire drone pilots there.

3RD - a drone pilot online marketplace

Customers search on the platform to find pilots for their needs.

Pilots take the job and work on it for customers, like Aerial Photography.

Customers get the deliverables and very satisfied with them.

Learn more about the customers, the trends of drone and marketplace

Brainstorm many different possible scenarios

Usability testing for further iteration

Empathize

Ideate

Test

Explore

Prototype

Explore the current existing products, to have more insights

Build a prototype, working through the user flow
Nomify:
Let Your Palette Travel

Project
A website for exploring food through cultural food stories and information. Expand your palette one delicious dish at a time.

Jereme Magsaysay
A coffee roaster. A martial artist. A design nerd. I design from the heart for the people.
What if you could relive past event memories?

What if other local non-profits helped with events?

What if the parade continued all night?

What if attendies could add to the Jebsburg Hi-way?
I believe that the core of any design lies at the center of who you’re designing for.  

**Inspiring Micro-NGO’s with Design Research**

**Project**
Participatory Design Research for small, donation starved and community oriented NGOs. Specific research with the Harrodsburg Heritage Days Association.

**Micah Nethery**
I believe that the core of any design lies at the center of who you’re designing for.
Better Sleep

Project
Quantifying health information to improve sleep experience. Define metrics of sleep quality, get insights from data, then guide the user to improve the quality.

Yi Nie
I strive to bridge the gap between technology and delightful experience.
25% of women between the ages of 18-24 reported being sexually harassed online.

Young women experience particularly severe forms of online harassment

Among all internet users, the % who have personally experienced the following types of online harassment, by gender and age...

PEW RESEARCH CENTER

What if dating services educated people on their mistakes rather than punishing them?

Mistakes have been made.

Sorry, I don't think this is going to work out but thank you anyway!

I don't understand. I've been nice to you I should at least get a date.

What's the deal?

Messages like this can suggest you are entitled to a person's time just because you did or said something nice. Try saying you understand!

So what should I say?

Try to be understanding that not everyone is compatible or just don't respond. They have their reasons for not wanting to pursue it further.
**A Safer Place to Date**

**Project**
My project is focused on educating those who have unknowingly sexually harassed someone online. By doing so, we create an online society that is more conscious of their behaviors and words.

**Derek Parker**
Detail oriented, a bit obsessive compulsive and lover of all things beautiful.
Discover a series of new things to do within your own community.

Let's get started!
Amanda Peterson

Project
Tiny Adventures enables newcomers to a community to better discover their surroundings through a personalized series of activities.

Amanda Peterson
I synthesize user insights into design solutions.
Adhitya

My goal as a designer is to optimize a user’s experience by bridging the gap between human mind and technology.

Project

This interaction design project aims at improving the in-car user experience for beginner drivers by aiding in reducing anxiety while driving.

Reimagining In-Car UX
Coachly

**Project**
Coachly is a tool to capture real-time events in a soccer game to reduce the cognitive load of coaches and help them make data-driven decisions.

**Karthik Rao**
A human-experience designer with a passion for technology.
How might we explore positive connections between fitness and body image through a lifestyle change?
Fempower: Facilitating support and body positivity through technology.

**Project**
This user-research capstone harnesses co-design as a powerful catalyst for users that are going through a lifestyle change. The designs proposed facilitate community support and body positivity.

**Prianka Rayamajhi**
Mapping insights to human needs through delightful interactions.
What if you could vote from the convenience of your own home?
Votely: Anonymous, Mobile Voting

Project
This mobile application allows users to learn more about the political issues at hand in an election and vote on them. After answering the questions, their vote will be cast to an anonymous candidate.

Tori Rice
Mediating human connections through the use of technologies.

Votely
Anonymous, Mobile Voting

More Info
- US has a large amount of untapped oil and gas resources
- Oil production in the US has had a comeback during Obama’s Administration
- Oil and gas are obtained through drilling and fracking
- Harmful environmental effects come from drilling and fracking
**Project**
This project focuses on bridging the gap between digital realms and the physical world. Providing a two-way street between games and reality opens up myriad possibilities for play, learning and experimentation.

**Danny Rudzinski**
I strive to unite the instinctual nature of physicality with the digital world.

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A redstone circuit sends a digital signal to the server

The prototype converts the digital signal to analog

This allows the digital space of Minecraft to control real-world devices in the IoT

Merging Realities
Zhijian (Owen) Shi

“Design is not a skill, but the ability to capture the essence of an experience by sensing and discerning the user’s need.”

Project
A companion robot that grows and thrives as users complete exercise plans and other tasks. It leverages the emotional connection people can form with things to cultivate a symbiotic relationship; one of accountability.
Virtual Reality and Empathy

Project
A user research project focused on how virtual reality can use empathy to create experiences for young adults in both their social lives and education.

Sarah Skertic
A designer who believes in the power of questioning the norm
Project
A new discovery platform for streaming entertainment that introduces a more organic, nostalgic, and spontaneous style of browsing in the age of on-demand content.

Evan Tank
I’m a holistic thinker who approaches a challenge by first questioning everything at it’s core.
MARIA BAMFORD
March 17 - March 19

LOUIS C.K
March 24 - March 26

TIM MEADOWS
April 1 - April 3
I believe in design that works to expand opportunities.

Project
Fans of stand-up comedy use many different platforms to learn about comedians and purchase tickets. This project aims to unify that process.

Scott Trepper
I believe in design that works to expand opportunities.
Peipei Wang
I am a designer, a visualizer, and a communicator.

Project
I designed Together - an iOS trip planning app that eases trip planning process by centralizing information and facilitating communication.
Track Personalized News Value for Readers

Analyze Readers' Feedback for Journalists
**EDITOR:**
Qualified News Curation System

**Project**
Interaction Design Empowering qualified and joyful news reading habit for readers.
A news editing tool specially designed for journalists.

**Daisy, Yi Wang**
Good design is a long and subtle conversation between a designer and users. We inspire each other
Texting is filled with sharing much more than words. In fact, it rarely discusses serious relationship topics. Texting in this way can help create positive relationships. How can design make this happen?

Project

I am a designer who hopes to provoke a conversation with my design.
Doll Maker

Project
An app designed to motivate aspiring BJD doll makers to design and fabricate their own dolls. The app enables organizing resources, connecting potential collaborators, and find interested buyers.

Jianping Wu
I am an aspiring UX designer with a passion for solving problems through design.
Partly Cloudy
Chance of Rain: 10%
High: 83° Low: 69°

73°

Feb 23, 2016 11:36am

Hookipa Beach Park

Wish we could come again and surf!!!

0:04
I craft experiences that touch people’s hearts.

When we travel, many stories are created, many moments are captured, and many feelings are experienced. Sharing this memory with your travel companions, and re-experiencing it with a simple touch.

**Steven Zhao**
I craft experiences that touch people’s hearts.
Shuai Zhao

I believe good design is like tightrope walking. It’s all about finding the right balance.

Project

This system helps college students manage their procrastination by planning their tasks with clear goals and due date in mind. Users could also motivate each other through study groups.

Beat Procrastination
One

Project
ONE is a tangible wearable device paired with a mobile app. It allows users to customize their tracking/monitoring tasks, to collect effective and meaningful health data over time. The wearable device is designed to be worn in multiple ways to function in diverse practical and fashionable situations.

Xiaoyuan (Sharon) Zhu
Design to craft the experience for human needs with an innovative mind.