This annual report was written and designed by the 2018-2019 Idea Realization Lab Staff at DePaul University, in Chicago, IL. All images have been pulled from the lab and were created by students and various lab patrons.
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Mission and Values
The Idea Realization Lab is a student-driven initiative created to foster collaboration and an attitude of learning through doing within the DePaul community. Our affectionate nickname, the IRL, is a popular acronym short for ‘In Real Life’, which is a great sum of our mission. We provide a diverse set of tools, machines, resources, and the space for people to explore new interests, to share their knowledge, and to make things come to fruition.

Our continuously expanding areas include 3D printing, sewing, screen-printing, laser cutting, woodworking, circuitry, CNC routing, and more.

We hope to encourage people to build confidence in their problem-solving skills, while working in an environment that they can engage with and make their own. We seek to break the boundaries of major, coursework, and prerequisite study that so often prevents students, as well as faculty and staff, from freely experimenting and doing new things without academic or professional pressure.
From Our Director...

Last spring the Idea Realization Lab emerged into DePaul’s consciousness with a student-led mission to engender exploration, tinkering, and a community service-oriented tradition. Through countless stories of imagination and inventiveness, we’ve built a community where all are welcome to learn how to commune through materials, tools, and each other’s ideas in the spaces between.

Today we renew our dedication to that mission and the promise that it has for DePaul. We challenge ourselves to hold a higher standard for makerspaces: one where we all have the access and support to tap into our latent creative potential. To that end, I am incredibly proud of our student employees, members, and our community partners who embody this spirit of seeking a new way forward together. A way where thinking and making are tied together, and where we pursue this endeavor with earnestness and playfulness.

Let’s celebrate this year!

The Idea Realization Lab now averages over 1,000 visits per month. Our student workers have hosted nearly 200 community events since opening. We have supported projects ranging from robotics to alternative game controllers. The list continues to grow. On the Internet, one student comment—which I think encapsulates our success well—states that “discovering this lab has led to finding an area that has fellow creatives [with] a strong desire to learn, test out ideas and “grow together.” That last part is critical.

Looking forward, our continued success has given us the opportunity to grow together toward new horizons. Beginning in fall 2019, the IRL2 (or
IIRL) will open on DePaul’s Lincoln Park campus. Though the IRL and IIRL will have their own differences, both will have the same mission, and will amplify each other’s successes. I look forward to seeing what our Lincoln Park community contributes to this second space, and how we can use our dual-campus presence to strengthen the bonds between students, faculty, and staff across departments and colleges.

The Idea Realization Lab name is a clever play on the popular abbreviation “IRL” (in real life) and also a play on words indicating that here, in our space, your dreams can become reality. These two ideas are necessarily bonded together in spirit. “Creative practice doesn’t really arise from some unseen, divine inspiration that strikes an artist [...] rather, art emerges from a negotiation between a creator, an initial vision or context, and a set of material limitations that help lead the idea from abstraction to concreteness,” the game designer and philosopher Ian Bogost writes. The individual, the idea, and the material are one, and ideas become reality when we commune between these spaces.

Let’s see what new ideas become a reality as we grow together and explore—negotiate—the unknown spaces between.

Jay Margalus

we need 24
of these.
-Jay
In the 2018-2019 school year, the IRL had 7,636 total visits
from students, alumni, faculty, staff, and the community

most commonly on Wednesdays
More than half of our patrons came in for meetings and class.
Overall there have been...

- 5 Gallons of silicone, resin and polyurethane to make molds, casts, and puppets
- 24 Packs of Ramen used to make “brains” for Halloween animations
- 22 Plants found in the lab
- 30 Pizzas eaten in the lab
- 15 Times that Michael has repaired the Prusas, Lulzbots, and Resin Printers after fails
- 1 Episode of Peppa Pig watched in the lab’s classroom
- 6 Silk Screens broken in the lab
- 70 Little Debbie snack pies eaten by staff
Meet Our Staff

Thomas Newsome
IRL Lab Manager
Game Design
Junior

Haley Sullivan
IRL2 Lab Manager
Animation
Junior

Fiona Baenziger
Lab Specialist
Data Science
Senior

Lily Fisher
Lab Specialist
Software Development
Senior

Michael Koenig
Lab Specialist
Film & Television
Senior

Claire Rosas
Lab Specialist
Graphic Design
Junior
Fun Staff Facts!

Jake broke his arm on a skateboard one week after making it in the IRL. He then 3D printed himself a wrist brace. His doctor was impressed (Jay was too).

After many long Thursday night closing shifts, Haley convinced Claire to try Nitro Cold Brew coffee. Claire refuses to drink anything else now.

Fiona has mood ring hair. Should we be concerned it’s always blue?

Lily’s favorite material to cut in the laser cutter is veneer (the sheet-of-wood kind, not the tooth kind).

Michael’s vertical jump is 48 inches.

Rachel is official landscaper of the IRL.

Thomas’s first words were “Hey would you mind signing in real quick?”.
Meet Our Administration

Jay Margalus  
Faculty Director

It has been a privilege to help build the Idea Realization Lab along with our DePaul community these past years. And while it’s always important to reflect on where we came from, I’m most excited about where we are going. With growing partnerships at both DePaul and throughout Chicago, the IRL is set to become a hub for maker-centered learning throughout the global educational community. I have no doubt that, in the coming years, we will play a role in transforming the way people think about education and learning, and I’m excited to see where this wave takes us.

Terry Steinbach  
IRL Advisor

The Idea Realization Lab’s second year has been exciting! The space has become a meeting place for students from all disciplines to create with one another, learn from one another, take classes, become authorized on equipment, and socialize. There’s a place for everyone from screen-printing to sewing to 3D printing to laser cutting. It has been amazing to watch the space adapt to the needs of and requests from the students.
Devin Bell  
Animation Stage Coordinator

I love the IRL for its opportunities for creative expression in a friendly environment. The facilities are fantastic, so curious artists can experiment endlessly. It’s exactly the type of space DePaul needs for its community to get messy and imaginative. Finally, I have so much respect for the staff. They are friendly, inventive, and insanely smart students who are always eager to help guests make amazing things. I have worked in dozens of shops and studios over the years, and I have never seen a place as inclusive and energized as the IRL.

Ben Kumming  
IRL Operations

My involvement with the IRL began only recently, but what I have seen so far is genuinely exciting. I am a bit envious that a resource like the IRL did not exist when I was a student. The sense of empowerment a space like this gives to its users is remarkable and it clearly encourages students to be ambitious. But to me, the real advantage of a space like the IRL is that the ambition is coupled with an understanding of the value of collaboration, community, and empowerment.
The Chicago Knights

Every Thursday evening (and even more often during the robotics build season), a community-based high school robotics team is hosted in DePaul’s student-run makerspace. It has become a way to make connections between the DePaul community, Chicago students, and DePaul values of inclusion, personalism, and professionalism.

The Chicago Knights FIRST Robotics team is a free program offering of DePaul partner, Agape Werks. The team welcomes students from any and all academic settings, but is intentional about recruiting teens from the south and west side. It has called the Idea Realization Lab home since January, 2018. Not only does the team, their parents, and mentors regularly meet in the lab, but they also host activities and events for other teens.

This past fall, they hosted over 200 high school students for the Chicago kickoff of the 2018-2019 FIRST Tech Challenge (FTC) season. Students came from public, private, parochial, and homeschool educational settings in the greater Chicago area to discover the 2018 FTC Design Challenge.

As the Chicago Knights developed their robotic solutions, they also learned to use the various tools in the makerspace, including the 3D printers, X-carve CNC, vinyl cutter, heat press, screen press, and traditional shop tools. They created accessories for their FTC robot and for other Chicago teams. In addition to supporting their own FTC team, the Knights mentored two rookie teams who were able to use the FTC field located in the IRL for practice and training.
A team of DePaul students from IT278 partnered with the Knights to redesign the team website (ChicagoKnights1739.org), resulting in a responsive site with private space for members. DePaul students also served as event volunteers at the official November Chicago South FTC Meet hosted in the IRL for all Chicago teams who meet south of Madison. A very common reaction from members and visiting teams is “wow, I never knew DePaul offered anything technical”. Team members working side by side with DePaul students has helped foster an expectation that college is the next step after high school and that DePaul in particular is an option.
The Idea Realization Lab is a resource available to the entire DePaul community, from students to alumni, faculty, and staff. We provide machines, tools, and materials at no cost, and offer workshops to teach visitors how to use the equipment safely. Our goal is to foster a spirit of collaboration and to promote creativity across the campus and throughout the city of Chicago.

3D Printer
3D printers are able to recreate a digital model in a variety of materials and colors. An extruder lays down hot plastic on the printer bed one layer at a time, creating a full model in plastic. We offer weekly workshops so you can learn how to use our 3D printers.

Laser Cutter/Engraver
Laser engravers use a movable laser to etch into a variety of materials, like wood and acrylic. The laser is able to cut precise outlines and also etch images into the top of the material. We offer workshops frequently for the laser engravers.

CNC Router
Using a movable router bit to carve into a piece of material clamped below it, CNCs are able to carve very complex shapes depending on the size of the bit you use. You can carve a number of materials, including wood, acrylic, foam, plastic, and metal. Our CNC Routing Workshop can tell you everything you need to know about CNC milling.
Woodshop
At the IRL, we have a fully equipped woodshop, with a chop saw, drill press, band saw, table saw, jigsaw, scroll saw, and handheld router. All of these tools require a certification, which can be arranged one-on-one with IRL staff. Other tools that do not require authorization are drills, rotary tool, sanders, and chisels.

Vinyl Cutter
We have two vinyl cutters at the IRL. These machines are able to cut precise outlines into vinyl, which then can be used as stickers, stencils, and screen printing masks.

Screen Press
Using stencils cut in our vinyl cutter, students can use the screen press to print custom ink designs on a variety of textiles. This is done by passing ink through a screen through a stencil, staining the fabric below in a pattern. We offer a workshop that covers both the vinyl cutter and the screen press.

Sewing Machines
We have several different sewing machines at the IRL, including a serger and an embroidery machine. We offer a workshop that covers best sewing practices. Look forward to our upcoming digitized embroidery workshop coming this summer!

Soldering Station
Included at the soldering station is everything one might need for circuit soldering including soldering irons, solder, heat guns, wire, connectors, pcbs, breadboards, buttons, and several measurement devices. All of these are available for creating digital interfaces and projects.
“Nowhere else in the Loop is there an approachable, comfortable space where students can get messy, experiment, do homework, and hang out like the IRL”
Community-building is a core element of the Idea Realization Lab’s mission. Equipped with a lounge space and classroom area alongside digital fabrication tools, the lab serves as a hub for several student organizations.

Several credit classes have called the IRL their home over the past year, covering subjects from experience design to basic electronics. The IRL’s unique classroom experience enables professors to bring new tech into their teaching, while students learn to take their ideas into the real world.

“I find that students are more engaged when they can bring an idea closer to reality,” says Professor Eric Landahl, experimental physicist and faculty member. “Students can put their knowledge in context and it makes them participants in science rather than just passive learners.”

DePaul Cosplay Club, a group dedicated to sharing knowledge about all aspects of cosplay from prop building to costume photography, formed as a response to the opening of the IRL.

The DePaul Robotics Club is another group taking advantage of the IRL for both meeting space and tools.

DePaul AIGA, a pre-professional student chapter of the nationwide graphic design organization, also has a presence in the lab.

Professor LeAnne Wagner’s graduate experience design students spent this Winter developing physical prototypes and interactive art pieces in the lab. “Making things physically can be humbling [...] collaboration happens naturally in this environment,” Professor Wagner says.
A secret hidden in plain sight, the IRL's Animation Studios are a mystery to most of the regular visitors to the lab. These black box rooms function as studios for live-action filmmakers and stop motion animators, and have seen several projects, two Bluelight films, and even an MFA thesis pass through their doors. However, only one full-length stop motion film has so far been completed at the Idea Realization Lab. Austin Frick's Happy Hob Kabob is a Capstone masterpiece that became reality in our very own lab.

Happy Hob Kabob depicts the journey of an Old Man as he gathers items for the holiday of Hob Kabob. Each leg of this quest is told with a different animation style, including stop motion, 3D animation, live-action, and even slices of sculpted clay, for a total of nine (!) unique segments. From sewing tiny puppet clothes to playing with shampoo sewer goo late in the night, Frick utilized almost every area the lab has to offer. “I had many ideas for tiny parts, and then stitched them together into a plot,” he says, when asked why he chose to take on the task of combining so many distinct styles. “There's lots of different types of animation, and I put them all in.” Frick describes the film as a “riot good time for the family,” and watching it grow and develop has been a riot good time, too.

One piece of IRL equipment in particular was critical to Happy Hob Kabob's formation. The VOLO, an industry standard camera control rig, allows filmmakers to create real time camera moves and play them back frame by frame. For stop motion
animators, this means one can create sweeping camera moves and dynamic shots impossible to achieve by hand.

To our knowledge, DePaul is the only university that owns a VOLO. Without this machine, Frick would have been much more limited in his ability to compose shots and would have been forced to stick to still cameras and less ambitious sequences.

With the help of the VOLO control rig, various IRL equipment, and the “crazy friendly wacky staff” always around to lend a hand, Frick was able to create a film like no other. You can look forward to seeing Happy Hob Kabob on Vimeo after it completes the festival circuit.
EVERY SINGLE THING MADE IN THE IRL LAB:

*3D printed Star Wars costumes
*Fancy-schmancy wooden cutting boards
*Embroidered patches
*Wearable Worbla accessories
*Screen printed shirts for the Fullertones, Model UN, UXD, DePaul Men’s A Capella, and some bands or two
*Laser cut anniversary portrait
*Thotcon badges, (2 years in a row)
*Circuit boards for physics projects
*Shampoo Slime

*Heat transfer vinyl shirts
*Interactive art pieces, such as a heartbeat-driven drawing machine
*Wifi controlled robots
*Laser cut Christmas ornaments
*Silicone puppets for stop motion animation
*“Eggmoji” buttons
*Hardwood bookshelves
*Clothing repairs
*FIRST Robotics robots
*Chicago skyline portrait
*Vinyl gallery sign

*Laminated Lysol Wipe
*Stuffed fabric goldfish cracker
*Screen printed tote bags for Japan Table
*Phone cases
*Really delicious, but fake cookies
*Hand-bound books
*Engraved portraits
*Dremel-carved terracotta pots and planters
*Resin printed board game pieces
*Sewn aprons and bags
*CNC carved stamps
*Work tables
*Lasercut keychains and earrings
*Physical controllers for digital games
*9-foot tall inflatable arch with heat transfer text
*3D printed and motor-controlled GLaDOS from Portal
*Cosplay pieces and props
*Macaroni Necklace
*Heat transfer vinyl tshirts
*Vacuum formed packaging
*Halloween Costume for a wheelchair
*Thesis and capstone animation films
*Wooden Coffee Brewer
*Pour paintings
*Vinyl stickers and laptop decals
*Lasercut coaster
*Topographical earrings
*Fjarna buttons
*Custom IRL staff aprons
*21st birthday shirts
*Fraternity Stickers
*Japan Table Character buttons
*Renaissance Battle Gear and Suit
*3D-Printed Wrist Brace/Cast
*Living Hinges
*Wabash Lights
*Z-rack white boards
*LED Throwies
*Potted plants

*Really cool wooden stepstool
*Merchandise for Claire Club
*Ring-light for photoshoots
*Lightbox
*Beeswax Food Wraps
*Large Yellow Heart Pillow
*Cooking Aprons
*Saddle-stitched zines
*Oatmeal
*Papier-mâché heads
*Broken Glasses
*Paint Poured Tiles
*Glitch Art
*CNC carved Pots
*Bluetooth Car Adaptor
*3D Printed Carbon Fiber Seatbelt Fastener and Holder
*Large format puppet
*Fake zombie brains made out of instant ramen noodles
*Smashed pumpkin human head
*Matchstick Sculpture
*Popsicle Stick House
*Frank Ocean’s Music Video Set
*Photography Backdrop
*Sewn Elbow Brace
*Personalized 3D Cookie Cutters
*Graduation Caps
*Sewer whale goop
*Jean Jackets
*Gnomas Gnomesome
*iphone case
*Sewnheadbands
*Guitar shaped guitar pick tray
*Beard Comb

WELL, THE BULK OF IT.
Saying goodbye is never easy, especially when it’s to our fellow co-workers. This year we lose two of our amazing senior student workers to “the real world”.

The IRL is an amazing resource for our students, but what makes it most special are the friendships built within its walls. We will miss you Lily and Fiona!
Lily Fisher  
Mastercard

It is very heartwarming to see individuals coming into this space wide-eyed like I once did at the very beginning of the IRL. These individuals remind me that I am very lucky to work in such a welcoming and inspiring environment. Meeting hundreds of individuals from the DePaul community makes me proud to be an upcoming alumni. I am hoping to take up more serious projects with the laser cutter and beyond, and am anticipating being an alumni patron when I move back to Chicago after my journey to St. Louis.

Teaching the laser cutter workshops has made me appreciate my previous teachers and professors tenfold. These workshops have made me explore myself in ways I never knew I needed to. I have realized less information is more, and modular-ity is key, catering towards different learning styles (Visual, Logical, Verbal, and Physical) through each step. I have learned that captivating the audience early-on by finding a common ground, or just being overtly excited helps inspire the attendees to pay attention for the long-haul and become long-term patrons.

Fiona Baenziger  
The Federal Reserve

After nearly 2 years of working at the IRL, my time as a Lab Moderator is ending. I was here when we started and it has been quite the journey being apart of the IRL evolution. I remember walking into the space for the first time in the summer before we opened and it was a mess - but there was an indescribable energy surrounding all the unpacked boxes and new coworkers that we could make the space what we wanted. And that is exactly what our mission has become and will continue to be.

While I am happy to graduate and start the next stage of my life, I am sad that I am leaving a space that has fostered my own creative growth and new friendships. This is not a goodbye, it’s a ByeRL!