

Inventor



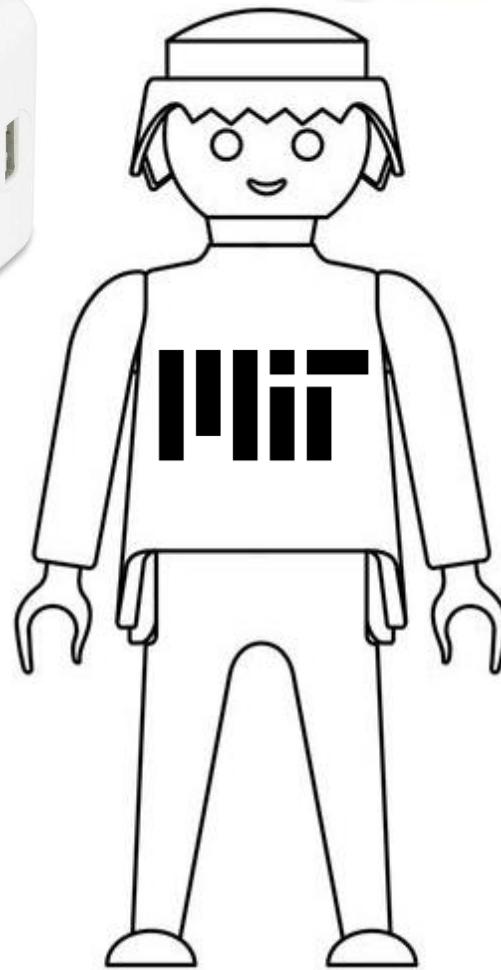
# How to CAD Almost Anything!

MIT IAP '26

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Session 1  
MIT  
AEROASTRO



# Agenda

- Quick intros!
  - Why CAD? Why VR?!
- Workshop logistics and important info
  - Overview of sessions and projects.
- Session 1:
  - Demo of the session's Inventor commands.
  - Demo of projects: 1<sup>st</sup> gen iPod classic,  
1<sup>st</sup> gen iPod USB power adapter.
- Questions?
- Preview of Session 2



# Quick Intros!



Me  
(Andy)

You (in IAP 2025)!

- 1) Name, major, year
  - Eg: Andy, AeroAstro, PhD Y3.
- 2) Hometown
  - Eg: Buenos Aires, Argentina.
- 3) Spirit animal
  - Eg: Angus Aberdeen cow.
- 4) Why CAD almost anything?
  - Eg: I think it's cool to look at a random object and imagine how to cad it!

# Why CAD? Why VR?

“I’m excited to learn how to CAD!”  
“learning new skills”

“creating CAD models for 3D printing”  
“make designs more efficiently”

“create 3D-printable anatomical models”

“getting hands-on with Unity”

“what tools can help bring your  
imagination to life!”

“the integration of CAD model into VR/Unity”

“being more confident in my  
CAD skills”

“learning how to use Inventor”  
“making a Trumpet”

“learn how to do VR”

“develop true fluency in  
CAD design”

“creative approach to CAD”

# Why Inventor?

- Add another CAD software to the “How to CAD” OCW series.
- Used widely in industry, with lots of functionalities.
- Free for students and educators!

The screenshot shows the MIT OpenCourseWare website. At the top, there's a navigation bar with the MIT logo, a search icon, a red "GIVE NOW" button, and links for "ABOUT OCW", "HELP & FAQS", and "CONTACT US". Below the header, a blue banner displays the course title "How To CAD Almost Anything". On the left sidebar, there's a list of other CAD courses offered by MIT: "How to CAD Almost Anything with SolidWorks", "SolidWorks Session Recordings", "How to CAD Almost Anything with Fusion 360", "Fusion 360 Session Recordings", "How to CAD Almost Anything with Onshape", "Onshape Session Recordings", "How to CAD Almost Anything with Siemens NX", and "Siemens NX Session Recordings". The main content area features a "Course Description" section with a paragraph about various CAD applications, followed by "Course Info" sections for "INSTRUCTOR" (Andy G. Eskenazi), "TOPICS" (Engineering, Aerospace Engineering, Mechanical Engineering), and "DEPARTMENTS" (Aeronautics and Astronautics). At the bottom of the main content, there are buttons for "Lecture Notes" and "Lecture Videos". To the right of the main content, there's a thumbnail image of a workshop featuring a LEGO house, a banana, and a test dummy, with the text "How to CAD almost anything!". Below the thumbnail, a caption reads: "Students in this workshop learned basic CAD skills and reverse-engineering of an object into a 3D model."

- Explore the differences with other CAD software, namely Solidworks!



# Welcome!



# How to CAD Almost

# Anything!



MIT IAP '26



# Workshop logistics (CAD)

Week 1	Week 2	Week 3
<b>Session 1:</b> January 13 (Tuesday)  Sketches, basic feature commands, editing and defining sketches, coloring parts, changing material properties	<b>Session 3:</b> January 20  <ul style="list-style-type: none"><li>▪ iPod classic</li><li>▪ iPod USB power adapter</li></ul> Revolve, mirror, circular patterns, angled planes	<b>Session 5:</b> January 27  <ul style="list-style-type: none"><li>▪ Tambourine</li><li>▪ Taipei 101 tower</li></ul> Assemblies, exploded view, animations, engineering drawings
<b>Session 2:</b> January 15 (Thursday)  Spline tool, sketch picture	<b>Session 4:</b> January 22  <ul style="list-style-type: none"><li>▪ MIT Intramurals banner</li><li>▪ Sports keychain</li></ul> Loft, sweep, review of previously learned commands	<b>Session 6:</b> January 29  <ul style="list-style-type: none"><li>▪ Play Station 1 controller</li><li>▪ Banana!</li></ul> Sketch/feature names, equations, design table, configurations
		<ul style="list-style-type: none"><li>▪ LEGO 2x4 brick</li><li>▪ LEGO bridge assembly</li><li>▪ Engineering drawings</li></ul> <ul style="list-style-type: none"><li>▪ Airplane economy seat</li></ul>

# Important info

- Meeting times:
  - Tuesday: 3:00pm – ~5:00pm
  - Thursday: 3:00pm – ~5:00pm
- GIS & Data Lab (Rotch Library)
  - Open M – F: 10:00am – 6:00pm
  - 16 computers (all of which have Inventor on them).
- Online resources:
  - GitHub  
<https://github.com/andyeske/How-to-CAD-Inventor>.

## How to CAD (and VR) Almost Anything!

IAP 2026 – AeroAstro Workshop

A compressed yet rewarding introduction to the parametric design software [Inventor](#) and game engine software [Unity](#), for beginners (no experience at all) and pro-users alike. Come learn how to CAD (computer-aided design) and VR (virtual reality)-visualize essentially almost anything!



*Yes, this could be YOU at the end of the workshop! You'll be equipped with the tools to design cool looking objects such as Spaceship Earth, a Scream Canister, a Green Alien, a Locomotive, a Mickey mug, and even a Luxo Jr. Lamp! These are all projects from the Summer 2025 ["How to CAD Almost Anything! – Disney Edition"](#).*

### Workshop Details

Subject Title:	How to CAD (and VR) Almost Anything!
Prerequisites:	Willingness to have fun and think outside the box!
Enrollment:	20.
Attendance:	Participants must attend all sessions.
Meeting Rooms:	CAD Sessions: <a href="#">GIS &amp; Data Lab</a> (first floor of the Rotch Library, 7-238). VR Sessions: 17-130 (The Hangar).
Meeting Times:	CAD Sessions (6): Tuesdays (T) and Thursdays (Th), 3pm – 5pm, on 01/13 (T), 01/15 (Th), 01/20 (T), 01/22 (Th), 01/27 (T), and 01/29 (Th). VR Sessions (2): Wednesdays (W), 4pm – 7pm, on 01/21 (W), 01/28 (W).

Check out the syllabus if you have more questions!

# Session 1

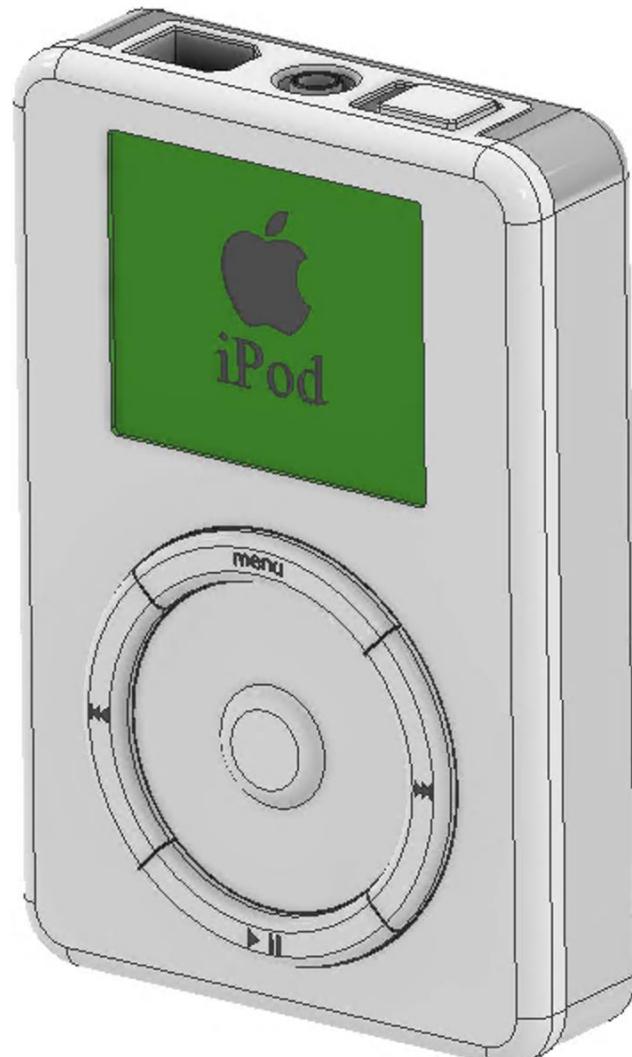


A first-generation iPod classic



A first-generation  
USB power adapter

# First-generation iPod classic



# First-generation power adapter





# Questions?

# Preview into Session 2



An MIT Intramurals Banner



A key chain of your favorite  
sports team