

# IEEE Project Competition

Week 3: Onshape

# Signup Form



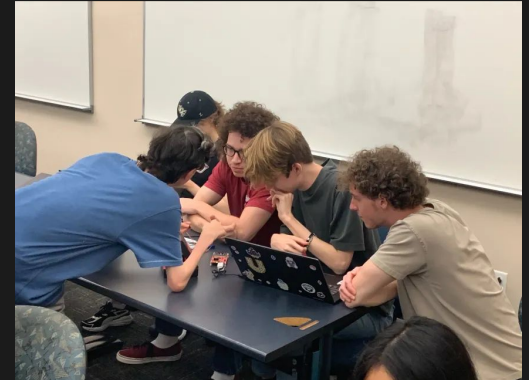
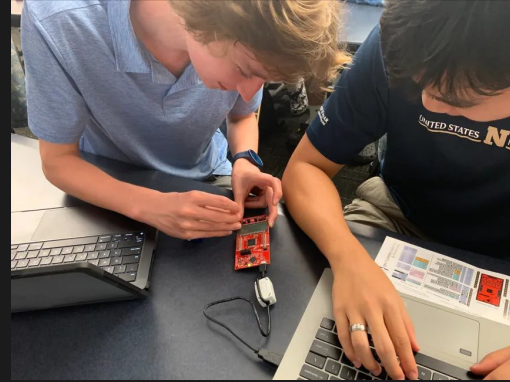
# Reminders

- Membership check is today!
- Please make sure to have a computer and mouse on hand.
- Group finalization we will get to that at the end of the workshop.
- General structure for today:

Membership check -> Onshape workshop -> Group Finalization -> End of workshop -> If interested (Fusion 360 and Solidworks installation guide).

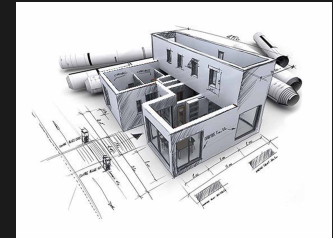
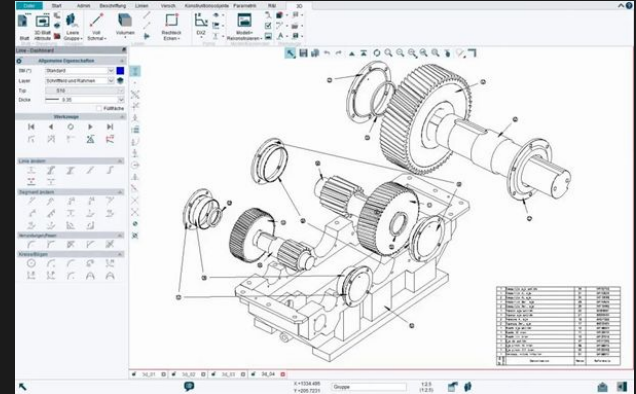
# Recap From Last Week

- Microcontrollers can do a lot.
- Installation.
- Went over basic C++ environment.
- Reviewed functions in C++.
- Learned how to setup inputs/outputs

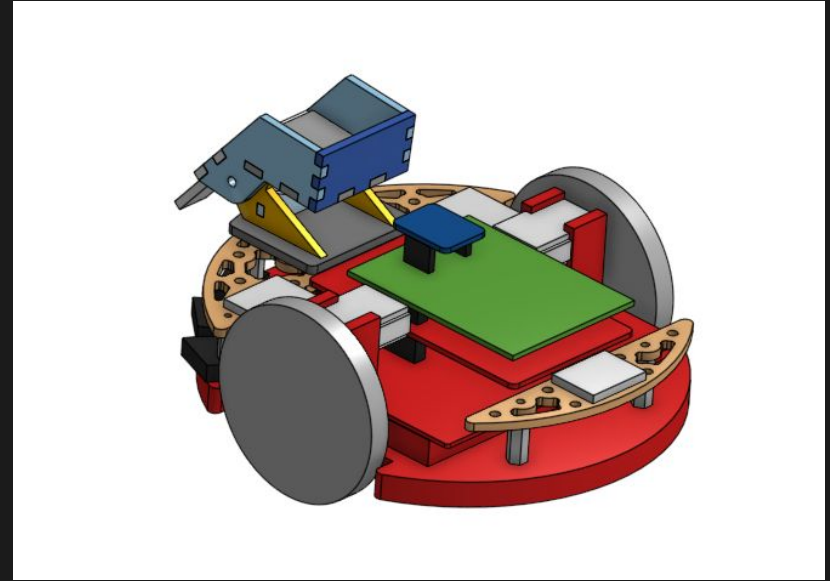
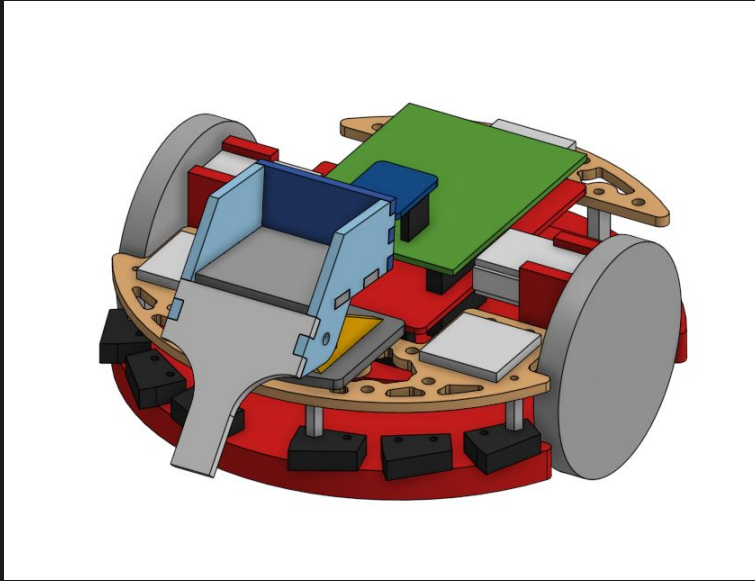


# What is CAD?

- **Definition:**
  - **Computer-Aided Design (CAD)** involves using computer systems to assist in creating, modifying, analyzing, or optimizing designs.
- **Applications:**
  - Engineering
  - Architecture
  - Product Design
  - Automotive and Aerospace Industries
- **Benefits:**
  - Increased productivity
  - Improved design quality
  - Enhanced communication through documentation
  - Creation of a database for manufacturing



# What your CAD might look like?



# What is Onshape?

## What is Onshape?

- A fully cloud-based 3D CAD platform.
- Allows for real-time collaboration and design sharing.

## Key Features:

- No downloads or installations required.
- Accessible from any device with an internet connection.
- Automatic version control and branching.

## Who Uses Onshape?

- Engineers
- Designers
- Educators and Students
- Hobbyists



# Onshape

## Main Components:

- **Documents Page:** Organize your projects.
- **Part Studio:** Create and edit parts.
- **Assemblies:** Combine parts to create complex models.

## Interface Overview:

- **Toolbars:** Access sketch and feature tools.
- **Feature Tree:** View the history and structure of your model.
- **Graphics Area:** Main workspace for modeling.
- **View Cube:** Navigate different views of your model.

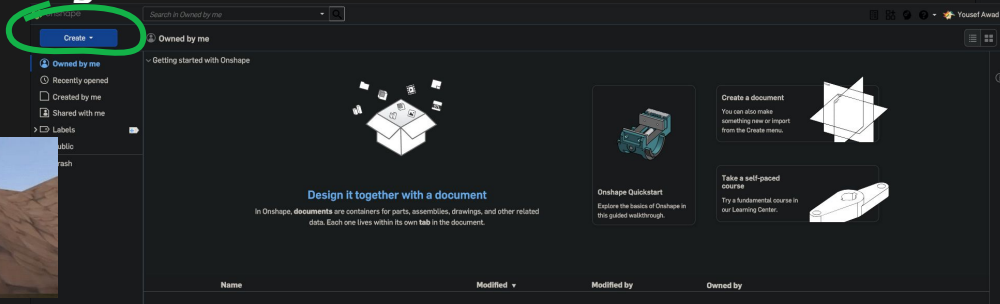
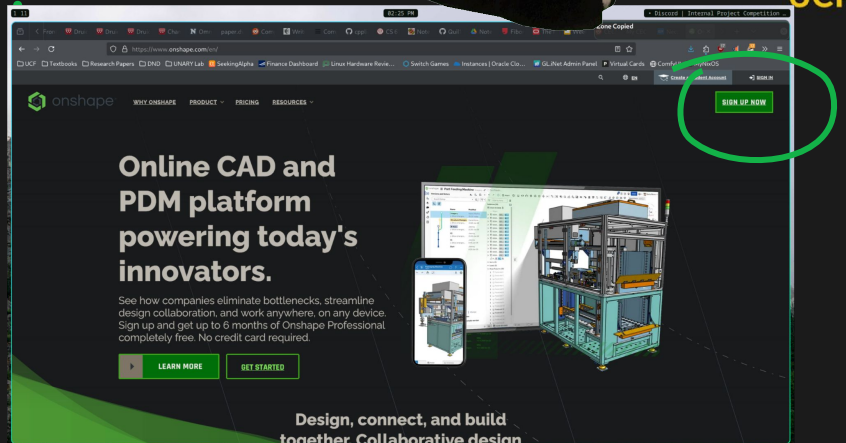






# How do you get this “Onshape”?

1. Go to <https://www.onshape.com/en/>
2. Click “Sign Up Now” (see picture)
3. Sign Up with your UCF Email (required)
4. Fill out the details that follow until it stops (sad, I know).
5. Click “Create” to start a new CAD drawing!

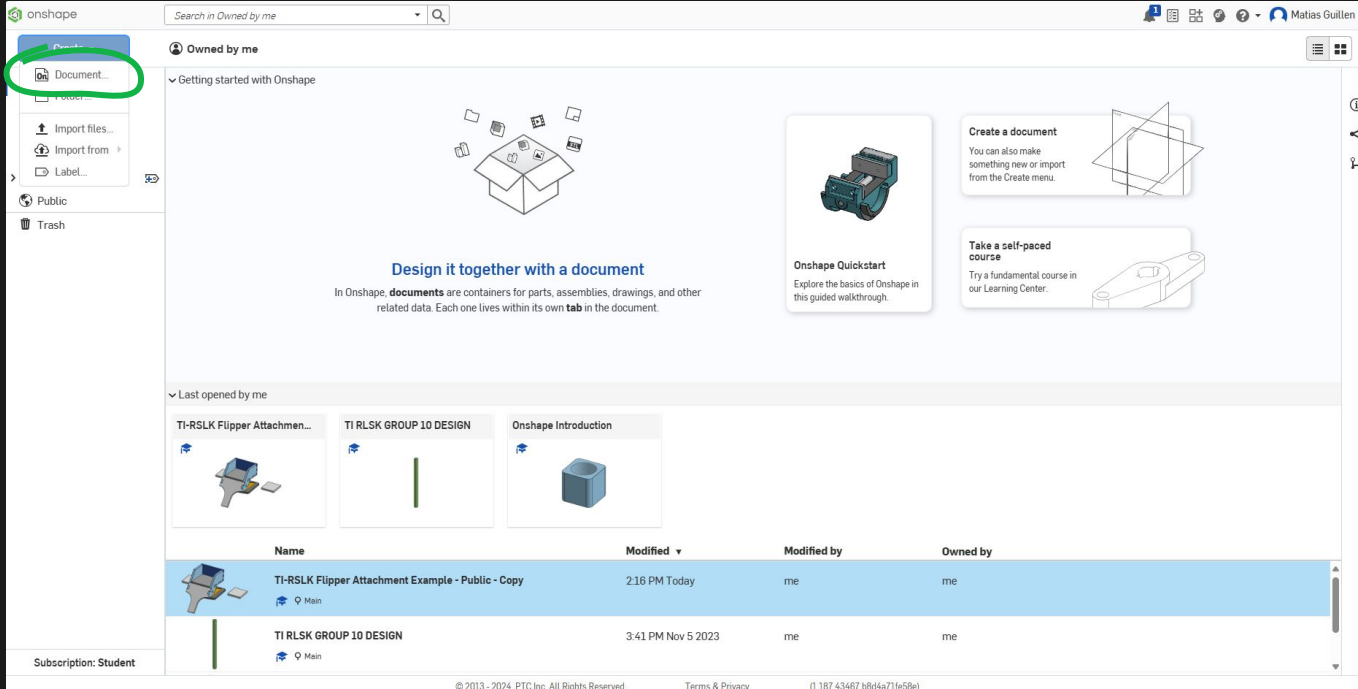


## Sign up for Onshape

GET STARTED FREE • NO CREDIT CARD REQUIRED • INSTANT ACCESS

First name	Last name
Billy	Bob
Email Address	
billybob@ucf.edu	
<button>NEXT</button>	

# Creating your first model!



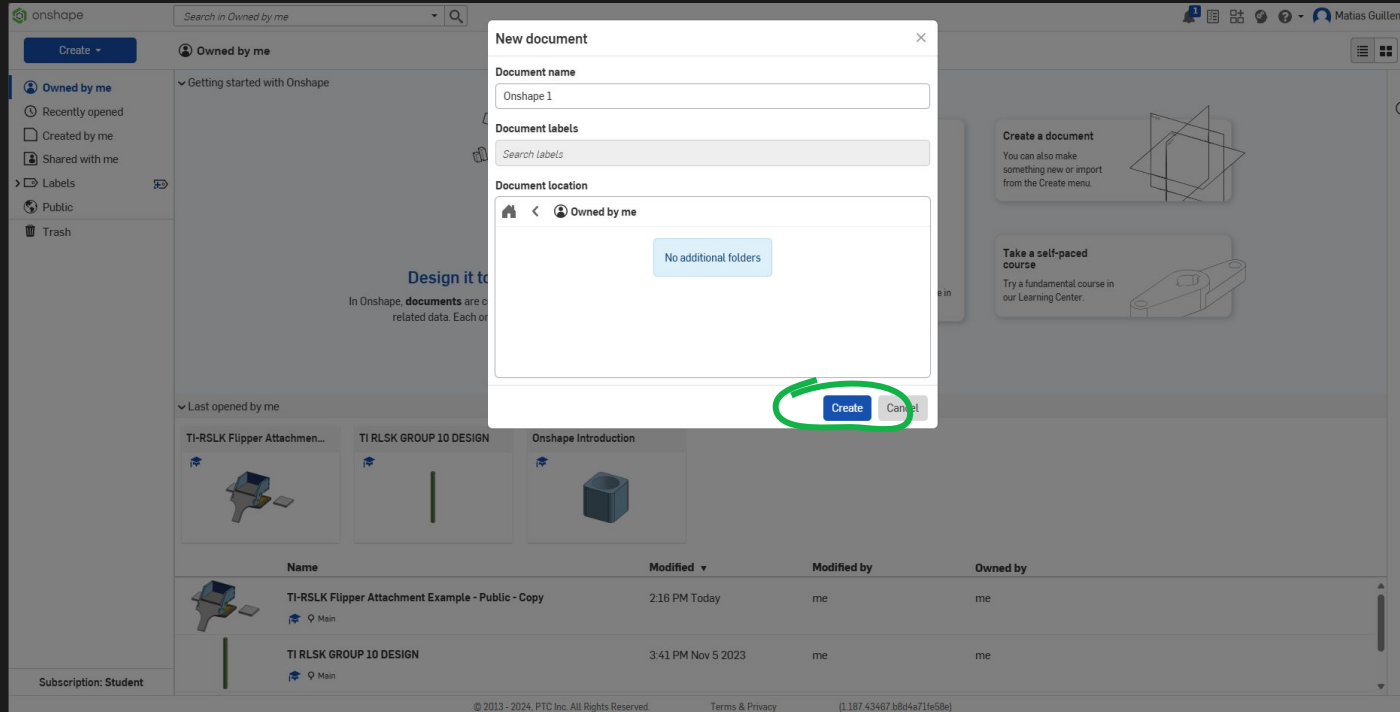
The screenshot shows the Onshape web interface. In the left sidebar, the 'Document...' button is highlighted with a green circle. The main area displays 'Owned by me' and 'Getting started with Onshape' with a central illustration of a box and various file icons. Below this, there are three cards: 'Onshape Quickstart', 'Create a document', and 'Take a self-paced course'. At the bottom, there is a section 'Last opened by me' with three thumbnails. Below the thumbnails is a table with columns: Name, Modified, Modified by, and Owned by.

Name	Modified	Modified by	Owned by
TI-RSLK Flipper Attachment Example - Public - Copy	2:16 PM Today	me	me
TI RLSK GROUP 10 DESIGN	3:41 PM Nov 5 2023	me	me

Subscription: Student

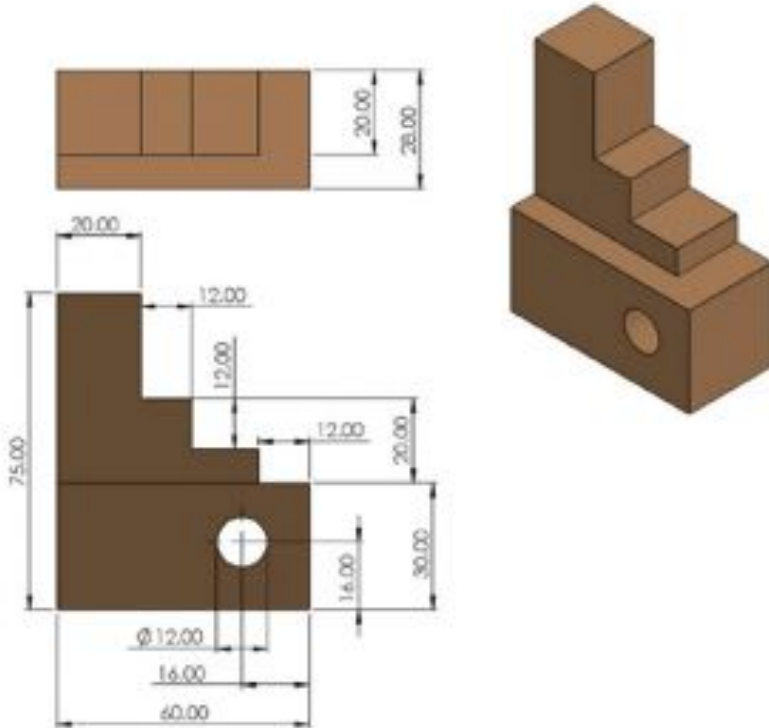
© 2013 - 2024. PTC Inc. All Rights Reserved. Terms & Privacy (1.187.43467.b8d4a71fe58e)

# Creating your first model!

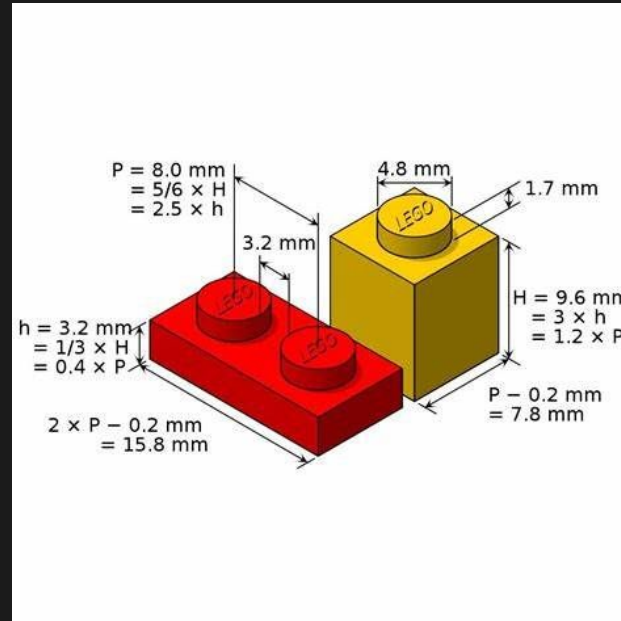


# Example see screen: Example File

# Final Example Part



You do!



# Team Finalization

- If you really want to work alone you can. But you will need to fully fund your project you can still participate in workshops and technical help in addition to rewards.
- We will be combining groups (sorry). 2 people per team minimum.
- Still not too late to join!
- Funds won't be given till we have a BOM (Bill of Materials submitted by you where we will order the parts for you.)
- Green means approved.

# Team Rooster

Electric Skateboard (Mini) - Beginner	Block Moving Robot - Advanced	Audio Visualizer - Beginner	Sheet Music Microphone - Beginner	LED Related Project - Beginner	Arcade Game - Advanced	Unsure	Unsure
Evan Eichholz	Eric Segrest	Alexander	Mike	Bree	Aldem	Logan	Abdiel

Floating Magnet - Beginner (Paying)	Batmobile - Beginner	LED Pitch Changer - Beginner	Climbing Robot - Beginner	Mobile Game - Beginner
Joshua Guo	Amy Diaz, Liani Garcia, Jennifer	Landon Luke Ryan Moran Samual, Hustin	Viviana, Frankey, Rolando, Keya	Joshua Jacob Jason



# Timeline and Important Dates

## Weekly Meetings - Estimated Timeline (Starting September 16th)

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Introduction	Microcontrollers —Erik	Fusion 360/Solidworks —Matias	KiCAD -Tino	Soldering/Prototyping/BOM help - Yousef/Matias	BOM Development/S ubmission

## Next Week's Session:

- KiCad workshop Tino!
- Group brainstorming and research phase.
- BOM Development.

Next session will be on **Monday, October 7th.**



# But how do you download the other tools????!!!

Simple!!

1. Go to <https://my.cecs.ucf.edu/> and login with you NID and password
2. Click "I Understand"
3. Follow the instructions listed when u scroll down

Complete the following process for access to the free SolidWorks Student Engine

1. Go to <http://www.solidworks.com/sek>
2. Fill out your personal information (Name & email)
3. Select "Yes" under Product Information: "I already have a Serial Number that starts with 9020"
4. Under Solidworks Version, select 2024 (2023-2024)
5. Click "request download"

## Solidworks Software Download Instructions

### Description

Instructions & Keys to access Solidworks Student Version

### Solidworks Software License Agreement

Before accessing Solidworks software, you must read and agree to the [Solidworks Education Edition Usage Terms and Conditions](#).

You agree to use this application within the Education Edition usage agreement provided. Redistribution or transfer of this application is being provided for your sole usage within the terms agreed to. Violation of these terms, Solidwork's agreement, or included application

**UNDERSTAND AND ACCEPT THESE TERMS AND CONDITIONS**

## Autodesk Student Free Software

### Description

Autodesk Student Free Software Access. Includes AutoCAD and other Autodesk tools.

### License key

[REDACTED]

### Notes

Please visit Autodesk site for instructions & access:

<https://www.autodesk.com/education/edu-software/overview?sorting=featured&filters=individual>