

CAD Final Project: Mini Desktop Vacuum

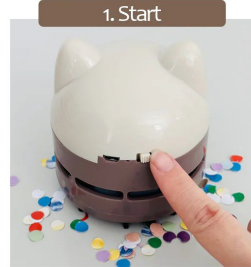
Droplet

Madeleine Chan



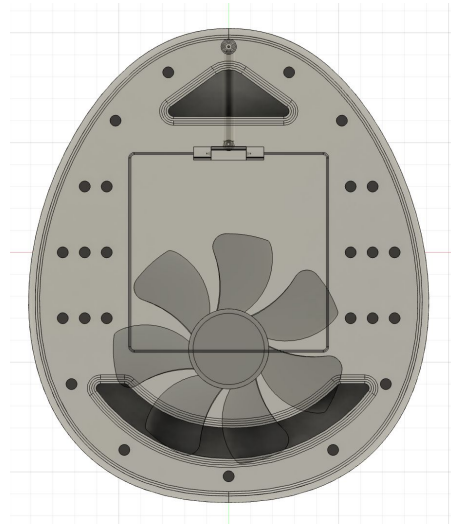
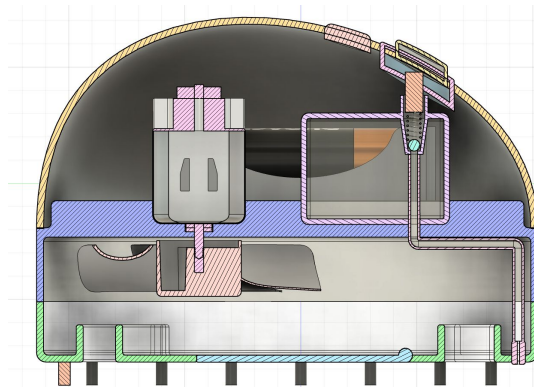
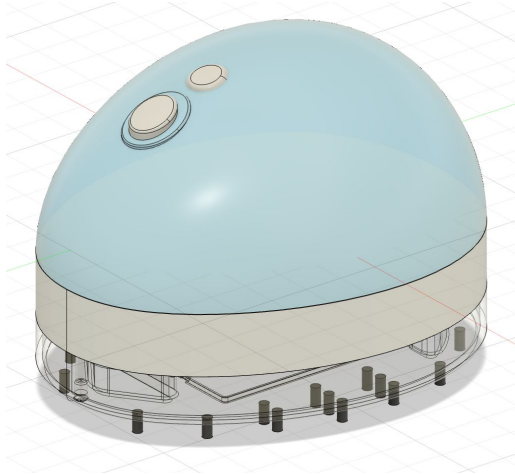
Background: Current Mini Desk Vacuums

- Round/circle shape → difficult to reach corners
- Messy and unclear waste disposal system
- Only feature is dry vacuum



Improvements and Design

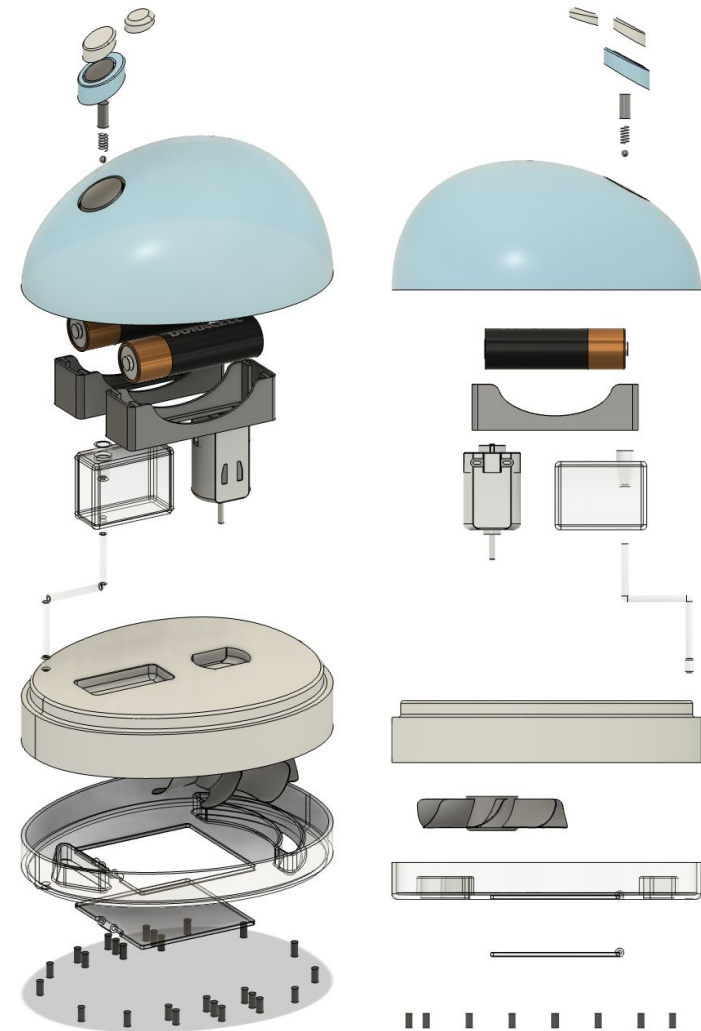
- Clear waste-bin and trapdoor disposal system → clean and intuitive cleaning
- Aesthetic “teardrop” shape → both wide and fine areas for cleaning
- Fan and water spray features → wet and dry cleaning functionalities



Exploded View and Components

Components:

- Top:
 - Top outer shell
 - Water and On/Off buttons
 - 2 AA batteries
 - 2 battery cases
- Middle:
 - Center piece/container
 - 130 DC motor
 - Water system (tank, tube, spring, metal ball, piston)
 - Fan
- Bottom:
 - Transparent plastic waste-bin
 - Narrow and wide openings
 - Hinge trapdoor
 - Nylon brush bristles

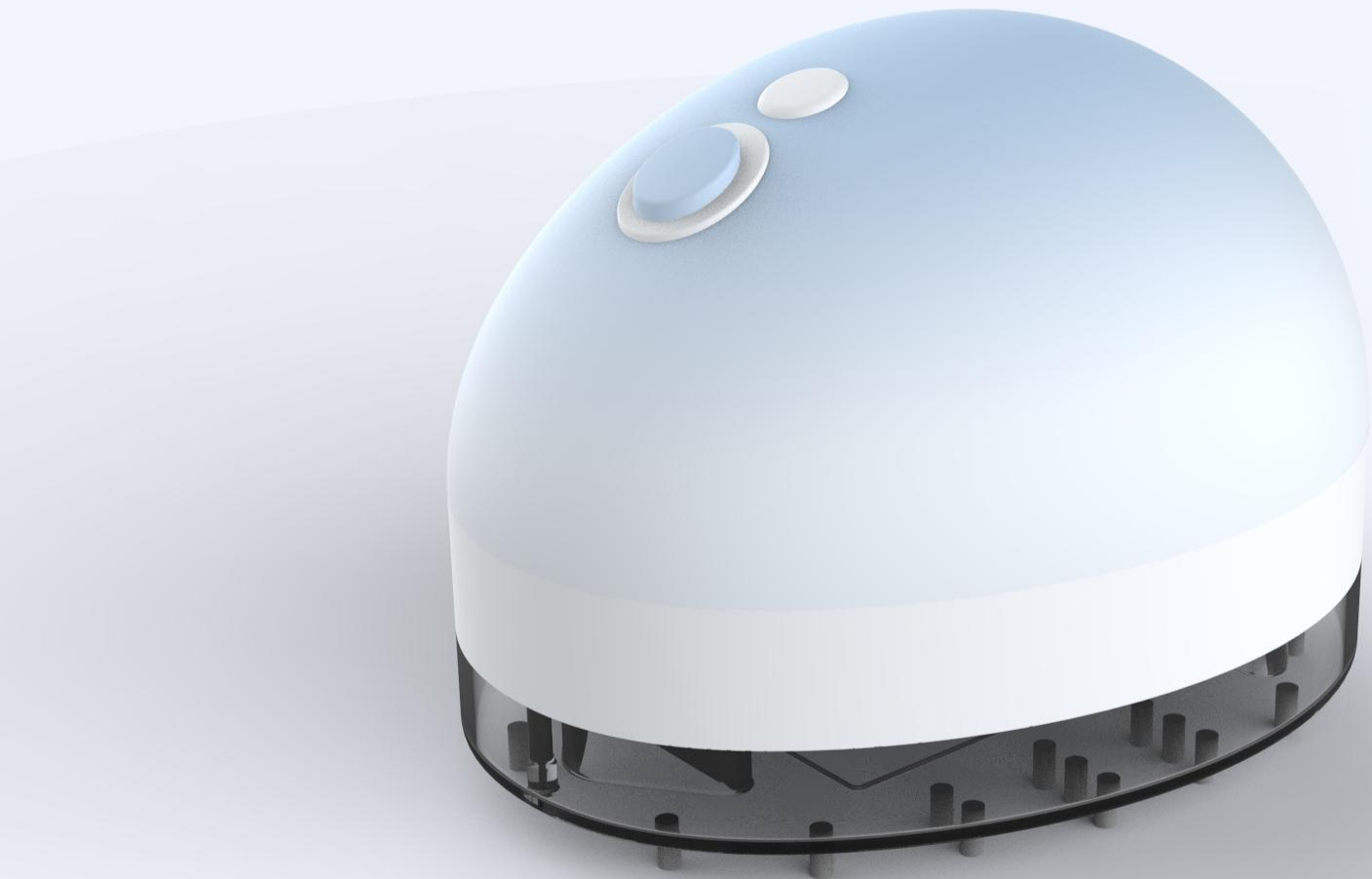


Explosion View Video (Fusion 360)

Link: <https://youtu.be/KbZf-CfN7Mc>

Product Concept Video (Keyshot)

Link: <https://youtu.be/CMhvy0cajc4>





Thank you!

