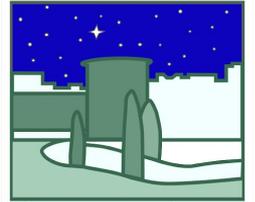




SERVATOREM



planetario



de pamplona



Nafarroako  
Gobernua



Gobierno  
de Navarra



European Space Agency

# ACTIVIDAD EXTRAESCOLAR STEM SERVATOREM: UN EQUIPO MULTIDISCIPLINAR





974 rescates en montañas  
en 2019



Más de 50.000 personas  
rescatadas en el mar en 2019



# Los objetivos de nuestro → CANSAT



# Tranquilidad



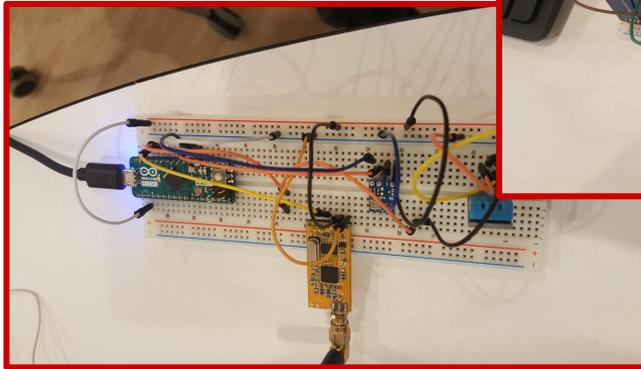
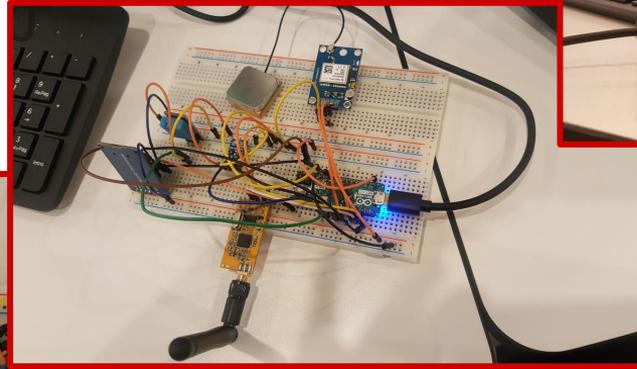
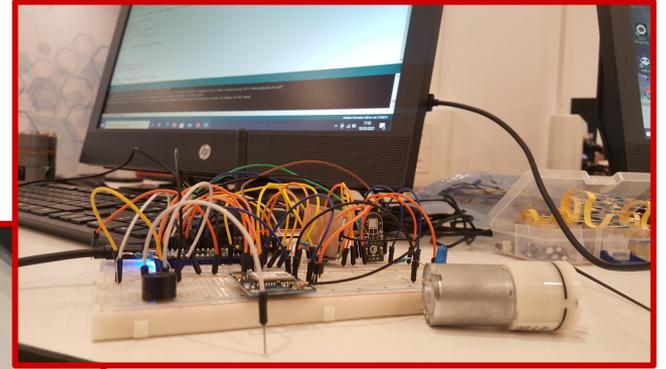
Imagen de Edgar Allan

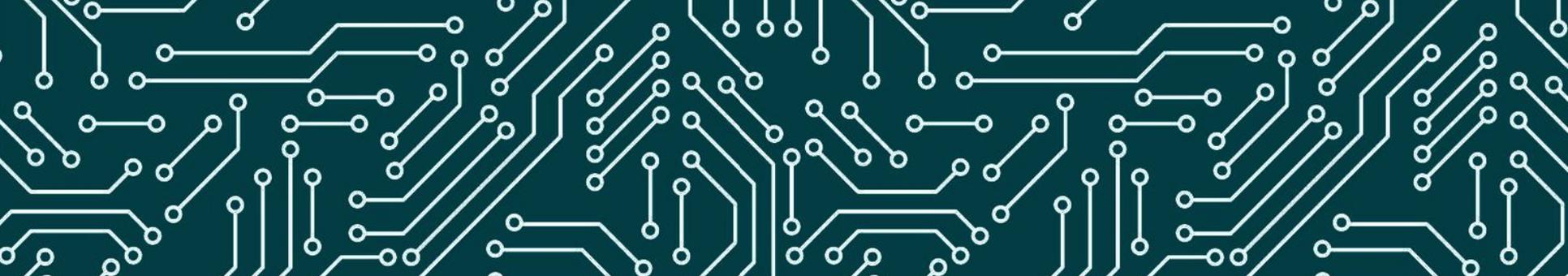


# Información



# ¿CÓMO VAMOS A CONSEGUIR ESTO?

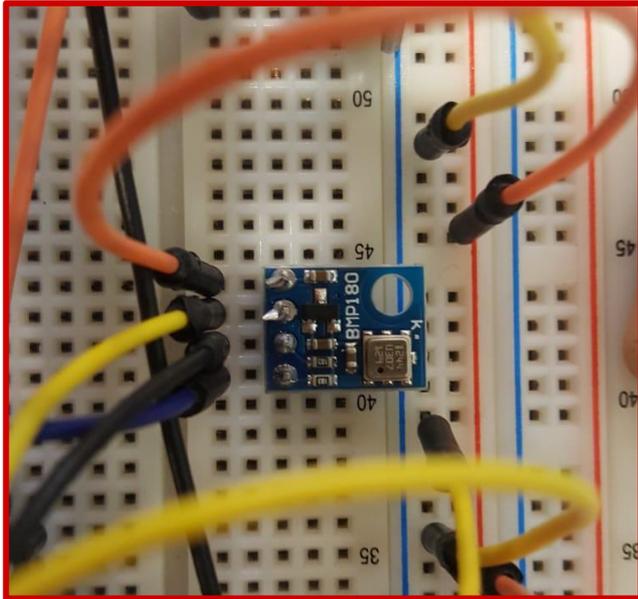




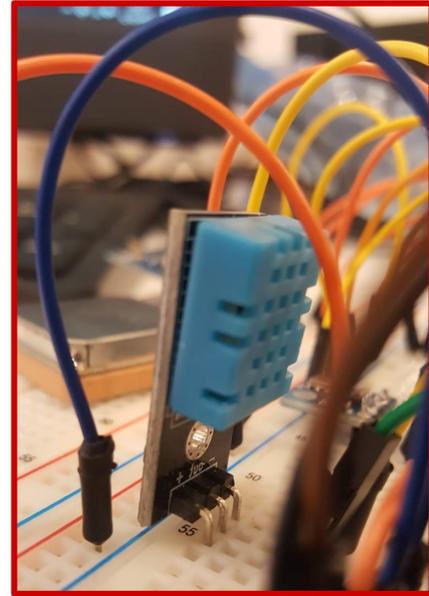
# Diseño eléctrico



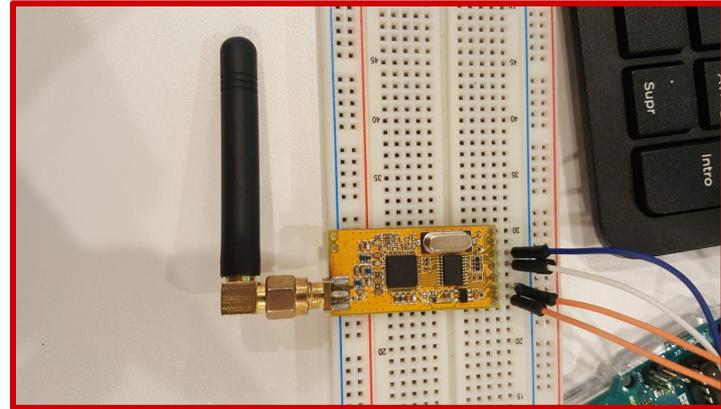
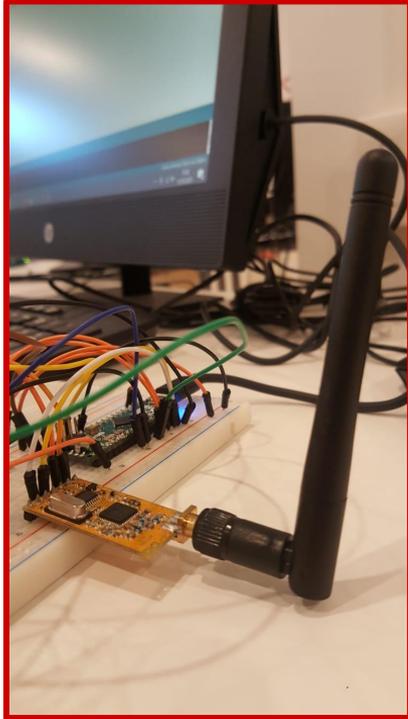
# GY-68 BMP-180



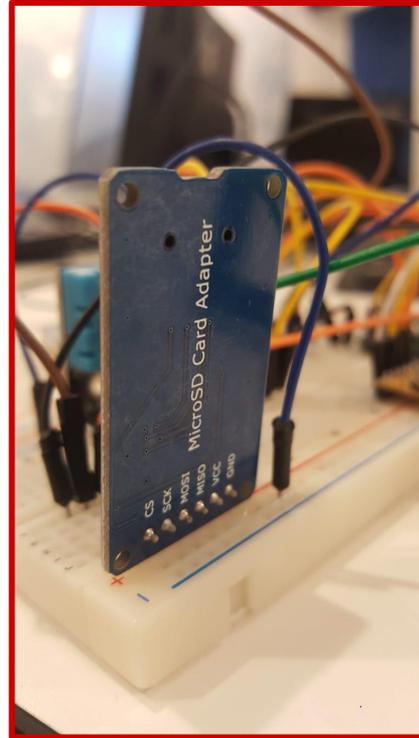
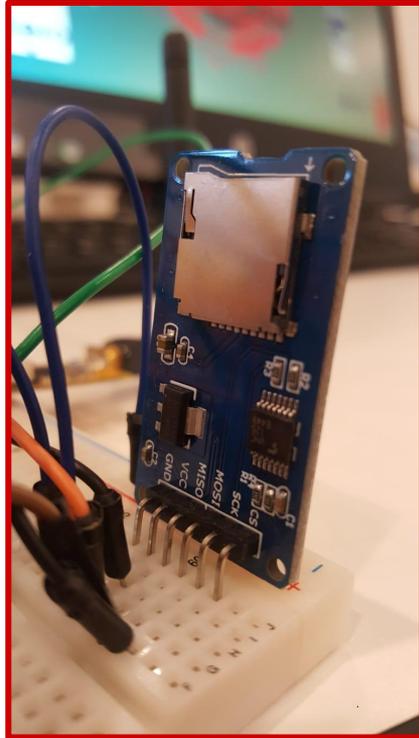
# DHT-11



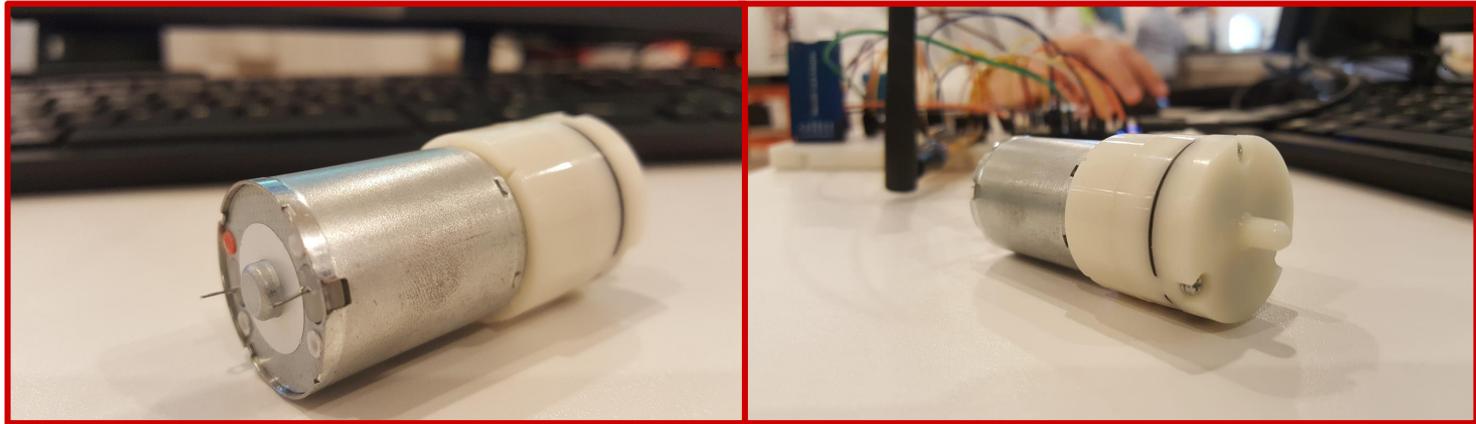
# APC-220



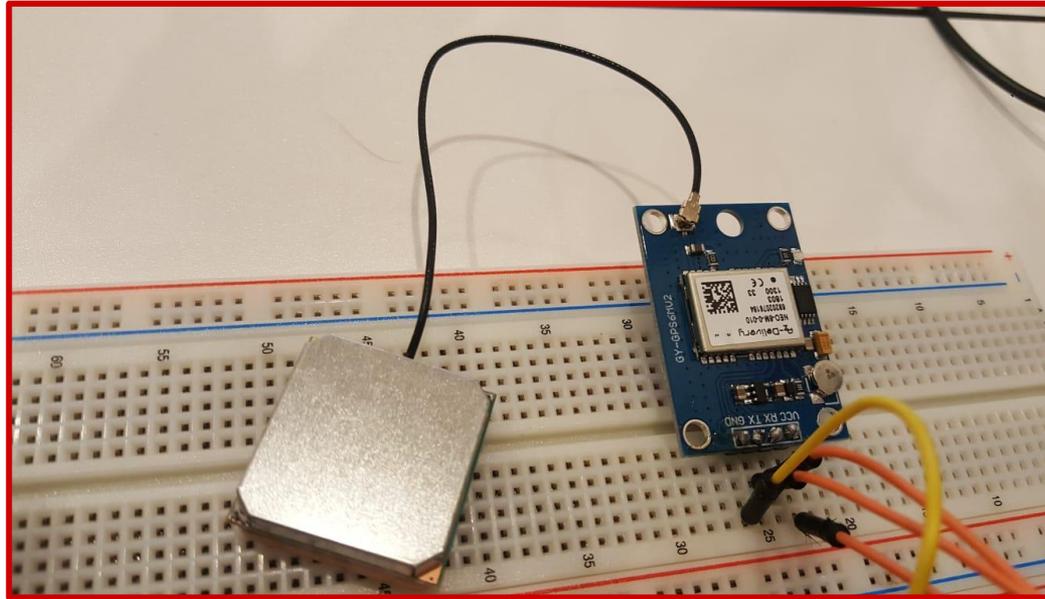
# Lector de tarjeta MicroSD



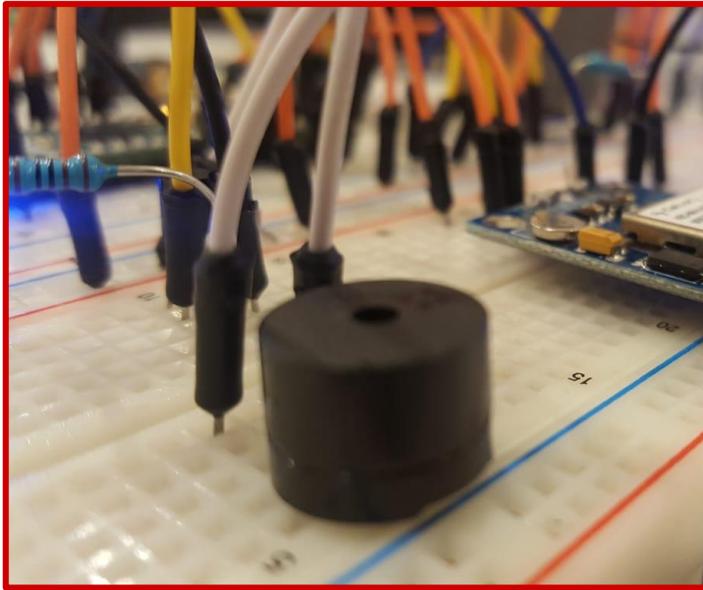
# Mini bombas de aire



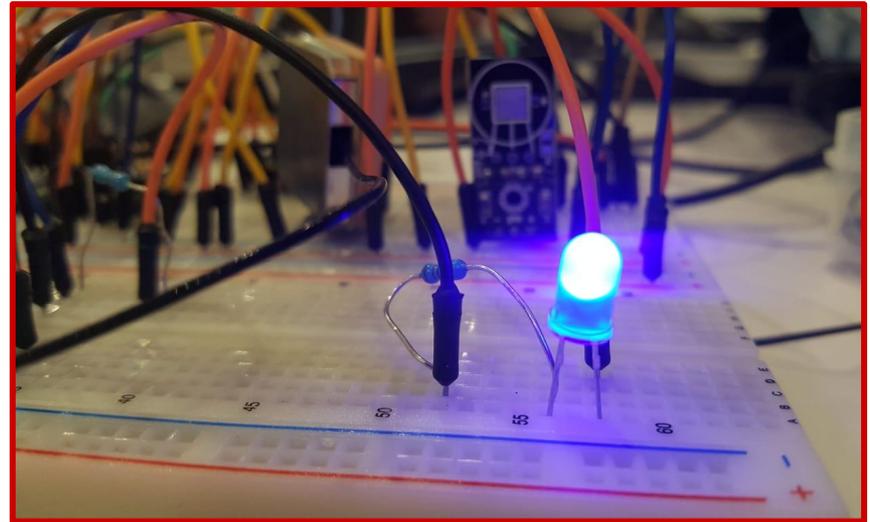
# GY-GPS6MV2



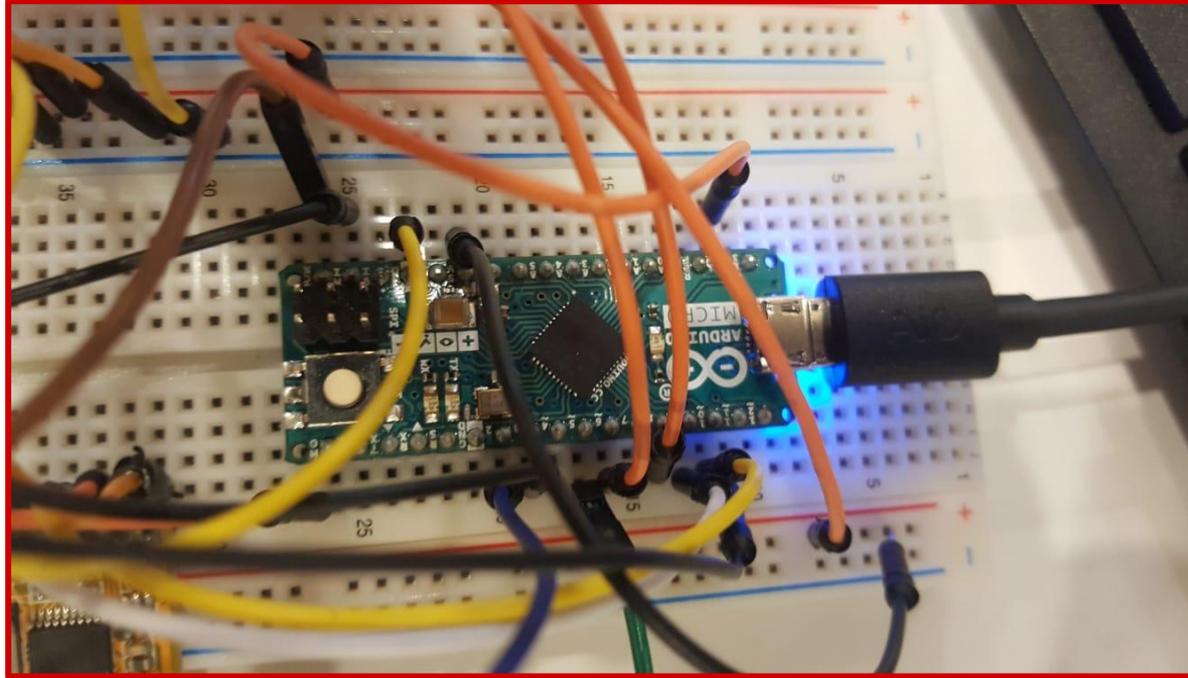
# Zumbador



# Luces LED



# Arduino Micro



# Planes futuros



*Imagen de Geek Factory*



*Imagen de Altavoz.me*

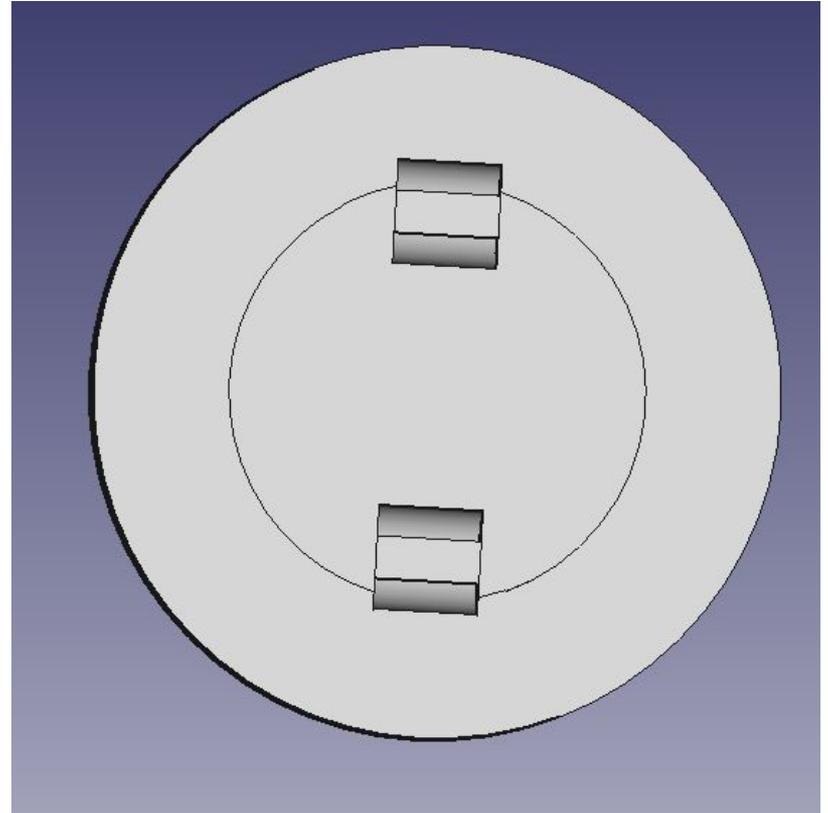
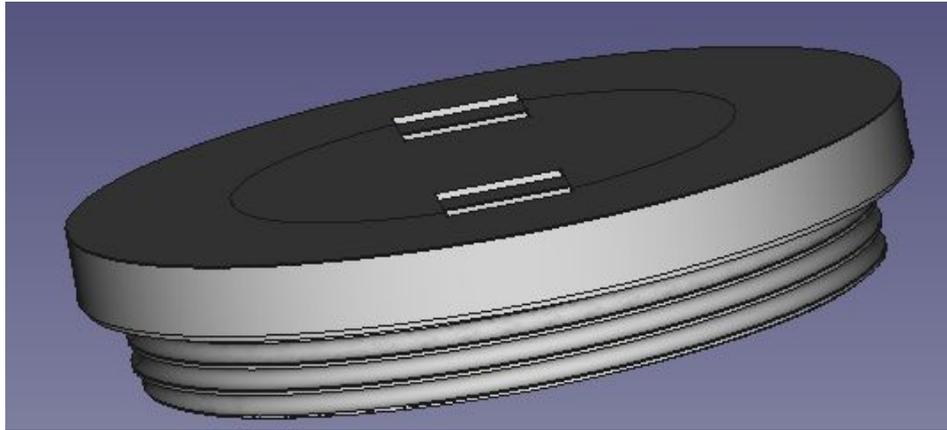
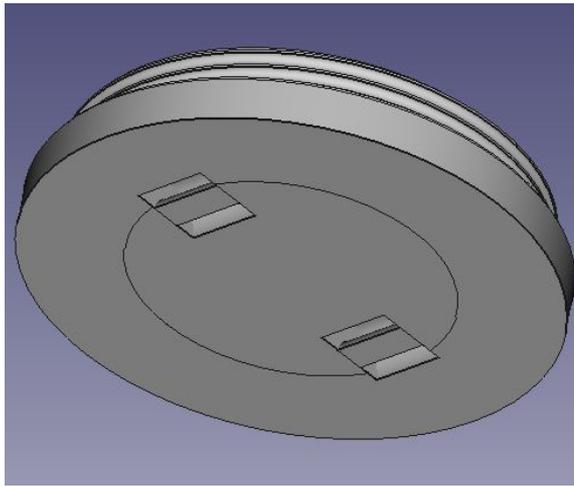




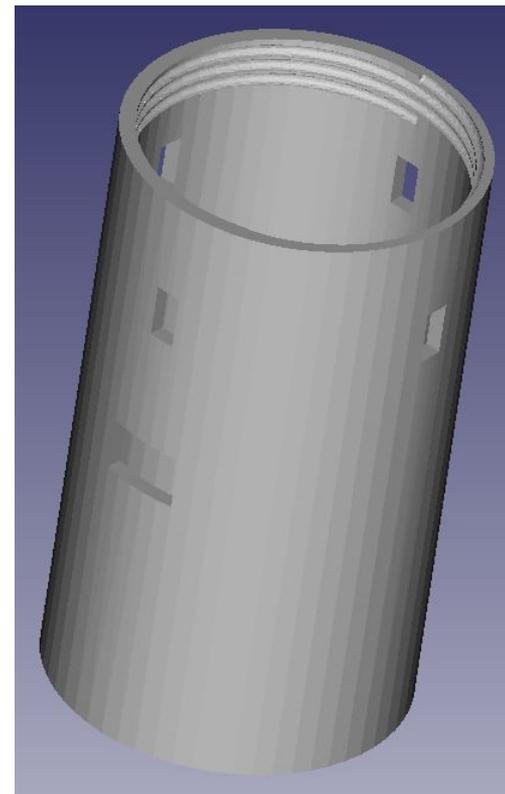
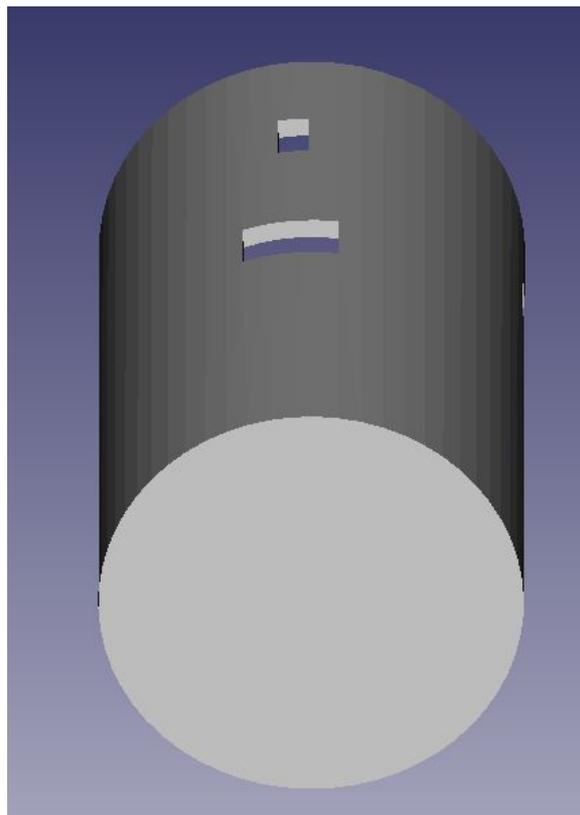
# Diseño mecánico



Tapa



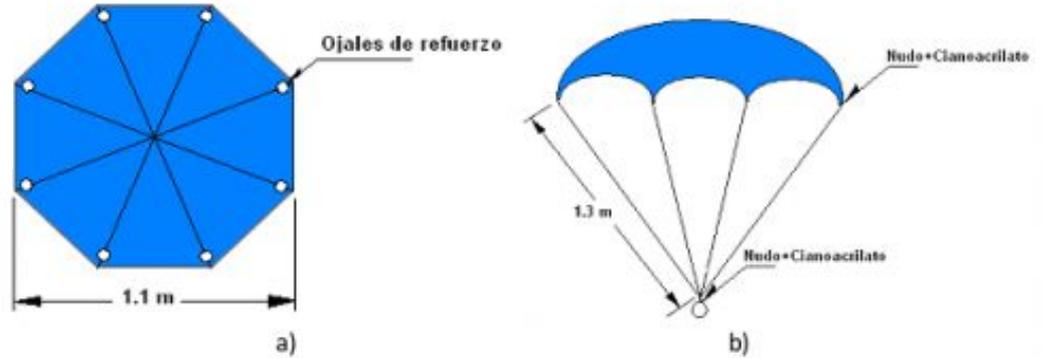
## Carcasa exterior



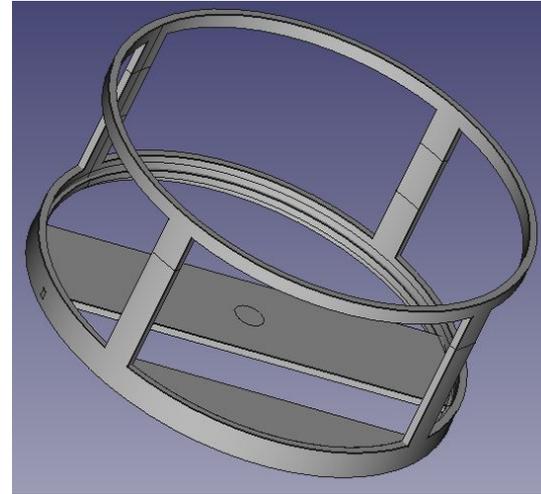
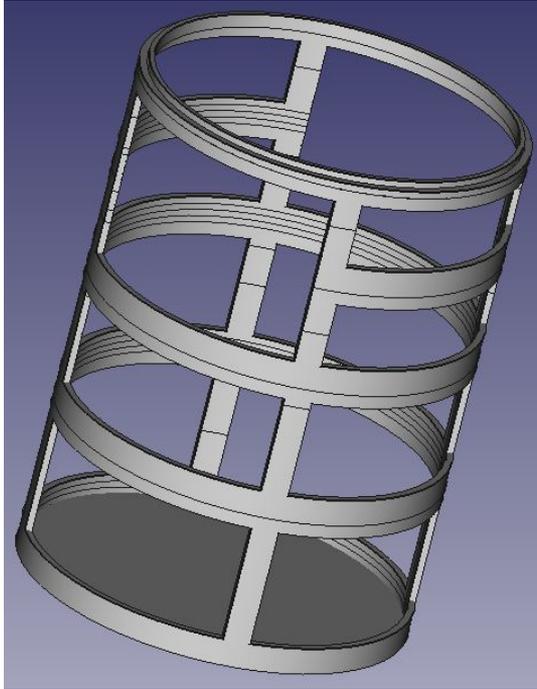
# Paracaídas

$$mg - \frac{1}{2}C_D \rho Av^2 = 0$$

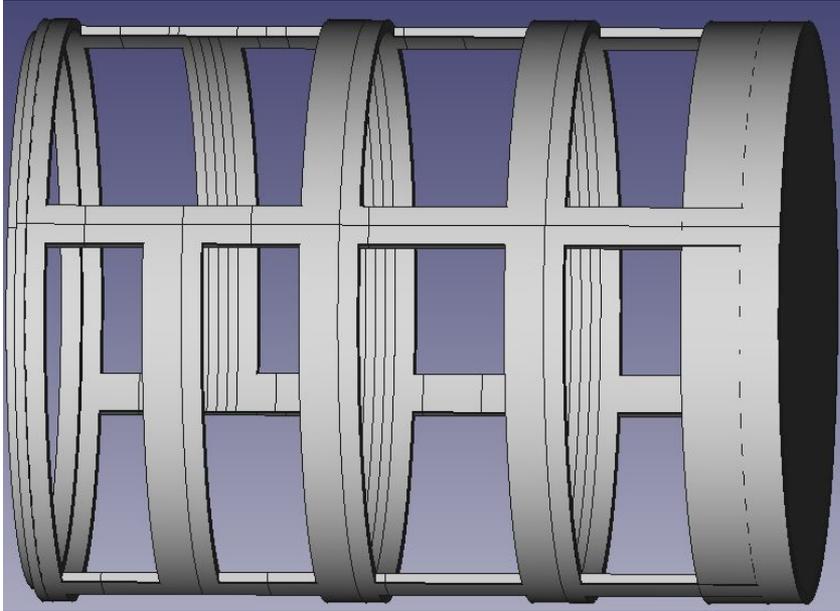
Fórmula para paracaídas octogonal.



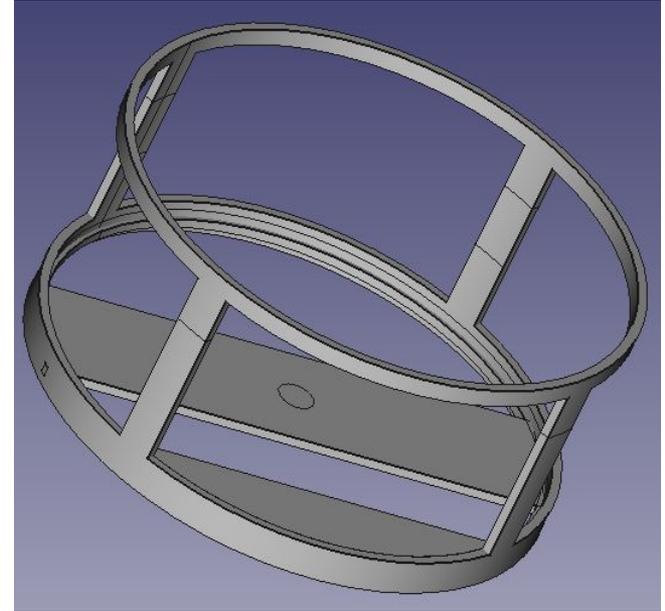
# Diseño del interior



# Módulos



Módulo de la bomba



Módulo para Arduino

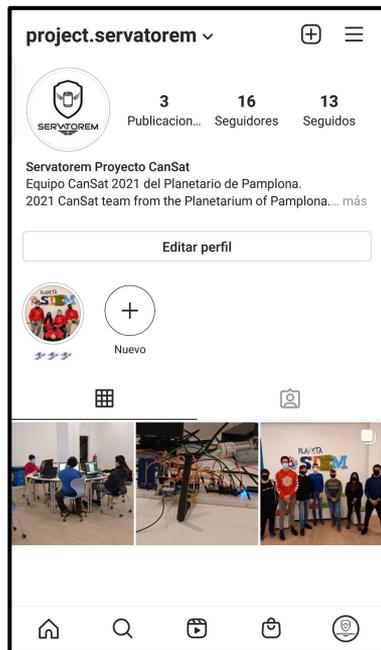


# Presupuesto

Concepto	Cantidad	Coste
Arduino Micro	1	18,00€
Batería 9V	1	4,95€
Bombas de aire	2	9,30€
APC220	1	13,18€
GY-GPS6MV2	1	4,99€
GY-68 BMP180	1	4,29€
DHT11	1	2,66€
Adaptador microSD	1	2,10€
PLA	90 gramos	2,25€
<b>TOTAL</b>		<b>61,72€</b>



# DIFUSIÓN



@project.servatorem



@ServatoremP



# AGRADECIMIENTOS



Nafarroako  Gobierno  
Gobernua de Navarra



¡Muchas gracias!



¡Mila esker!

SERVITOREM