



# E29 Final Project

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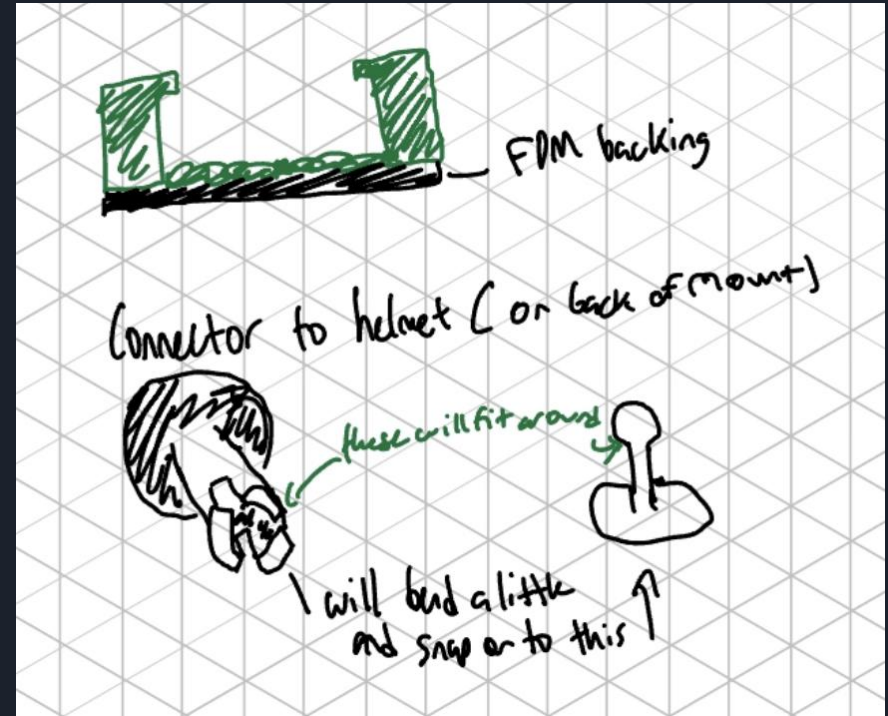
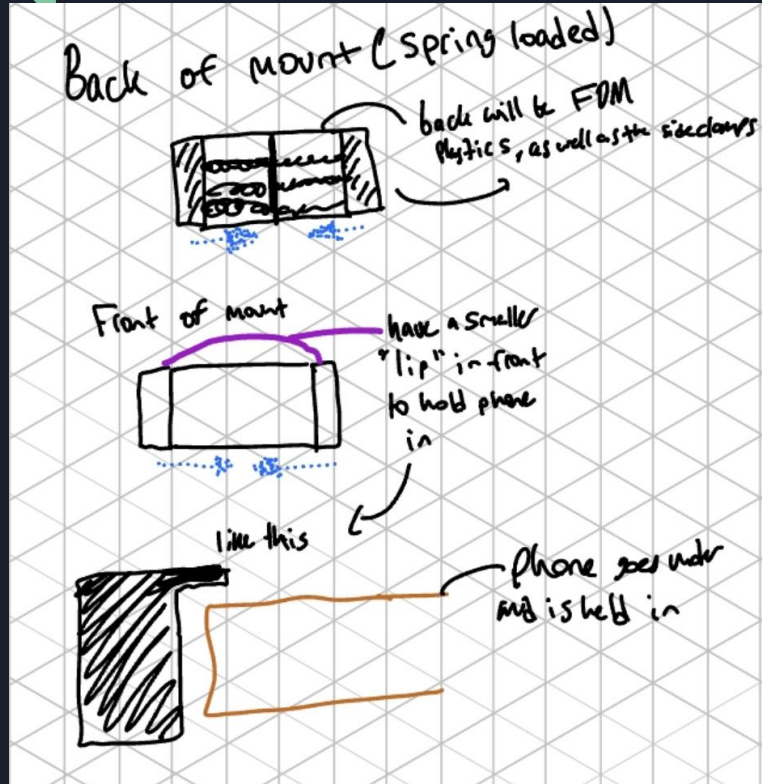
# The Problem:

- The need:
  - Recording ski runs safely and efficiently while mitigating risk to the user or others
- Why we're interested:
  - Many of the members of our group enjoy skiing
- Why companies should be interested:
  - The global action camera market is forecast to be worth 4.4 billion U.S. dollars by 2030
  - The market is growing at a CAGR of 5.2 percent between 2021 and 2029
  - The current leader in the action camera market is GoPro, with their flagship camera the Hero 11 with a price of \$550
- What we would add to the market:
  - Cheap alternative to GoPros
  - Accessible due to widespread ownership of mobile devices

<https://gopro.com/en/us>

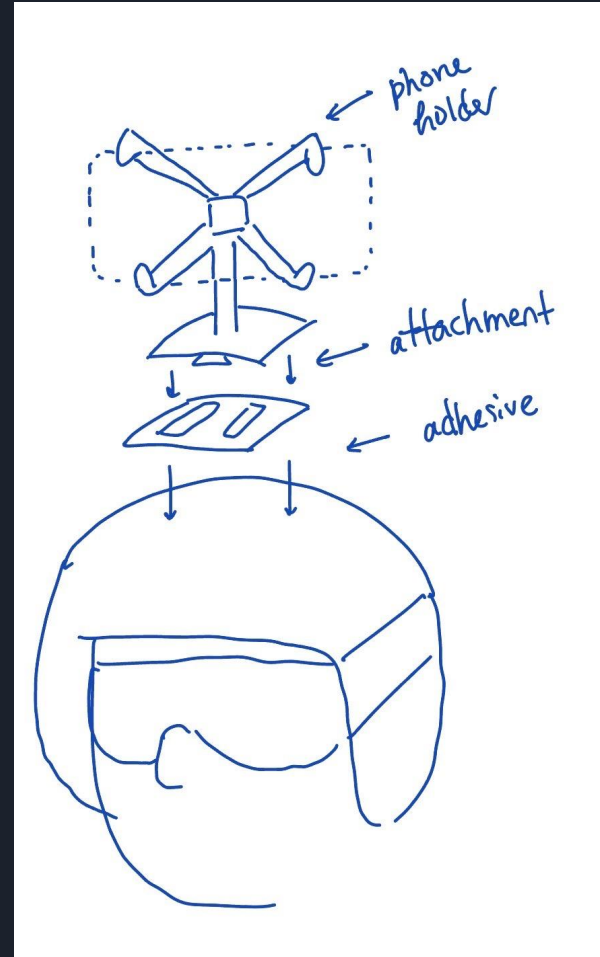
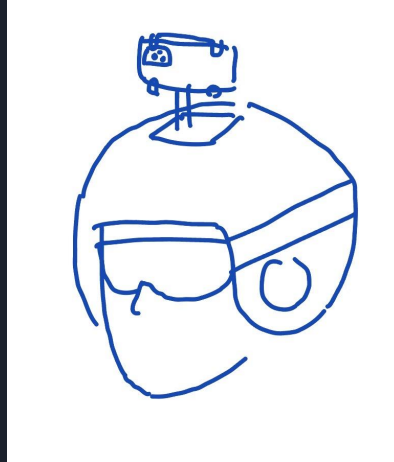
<https://www.statista.com/statistics/1059920/worldwide-sales-action-cams/>

# Current Concept: Ski/Snowboard Helmet Phone Mount

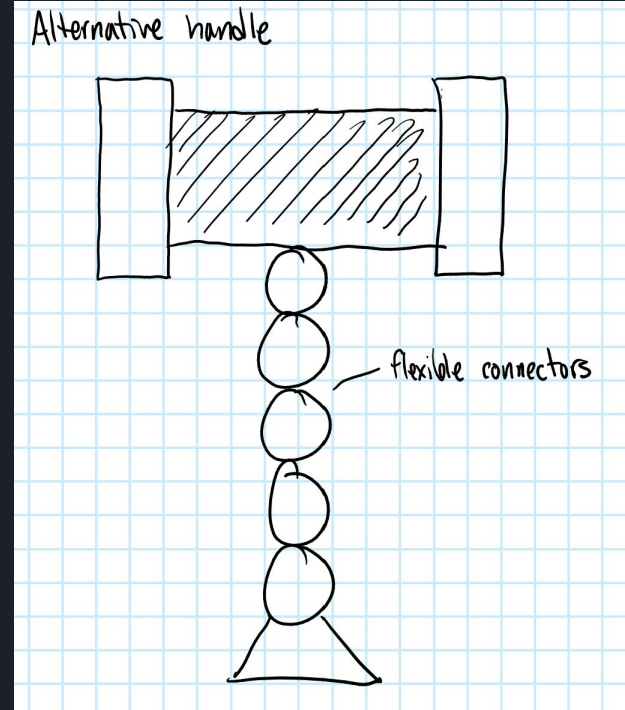
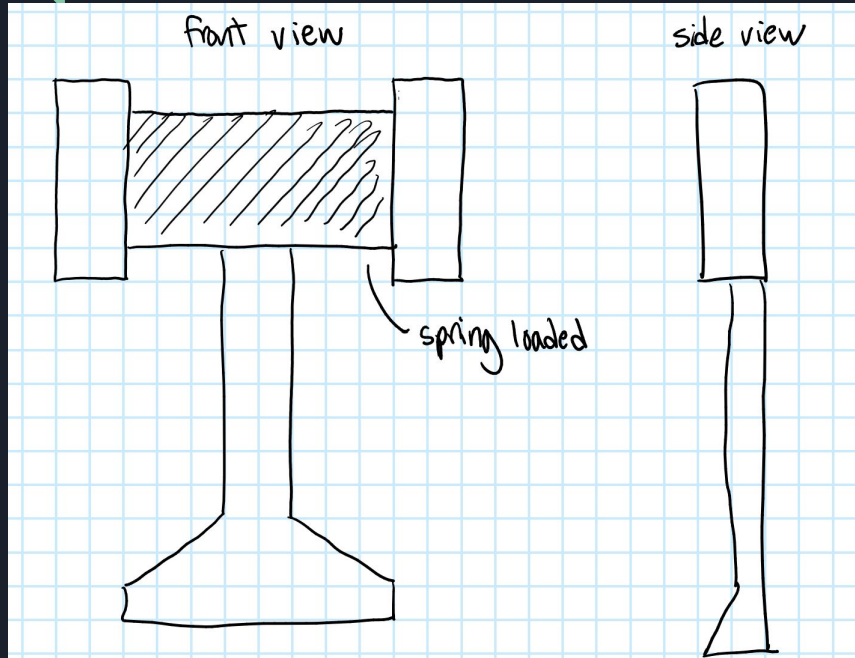


# Our Solution:

A universal phone mount that attaches to a helmet



# The Phone Mount:

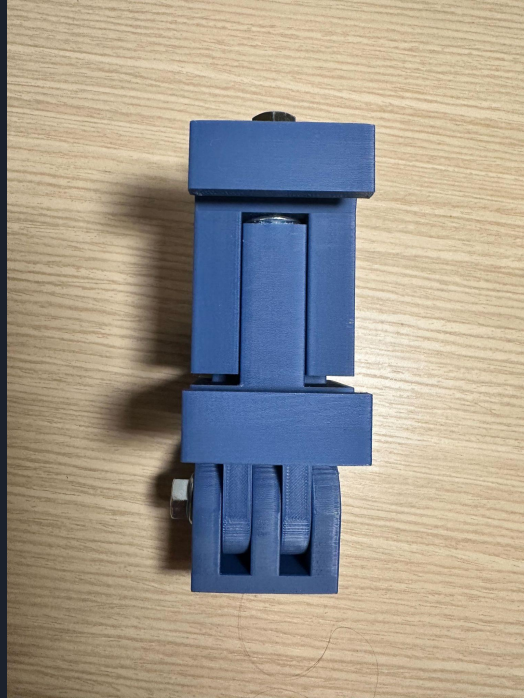
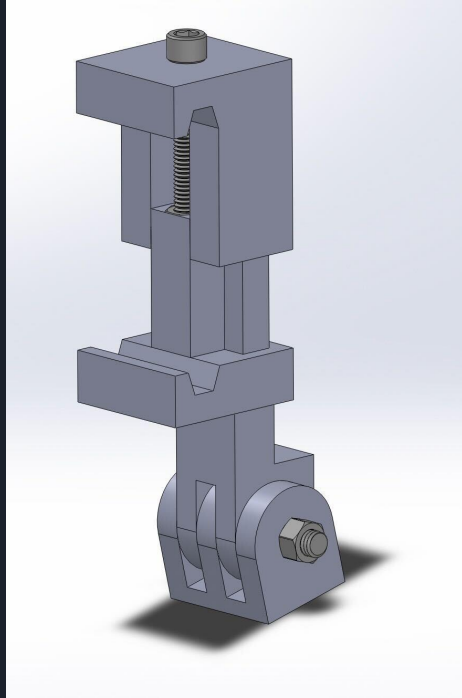




# Possible Manufacturing Techniques

- Likely will be almost entirely CAD and 3D printed
  - Potentially use Markforged X7 for carbon to make part strong enough
    - If not may need to be nylon or another flexible material to avoid cracking
  - Sliding mechanism could be printed as one part already connected using supports
  - Need to pay attention to layer orientation for part strength
- Springs in holder will attach via holes printed in
- Ball joint printed for tight enough fit
  - If not strong enough, some sort of hose clamp could be used to secure arms after positioning
- Use 3M double sided foam backed adhesive to secure assembly to helmet

# Final Prototype



# Sales Video

