**Topic ideas**

**Non-somatosensory/motor devices:**

Cochlear implants

Retinal stimulators (i.e., Argus II)

DBS (movement, mood)

Vagus nerve stimulators

Tongue stimulators (for vision)

Epilepsy intervention (i.e., Neuropace)

**Simple (no direct neural interface) motor devices:**

Arm/hand orthotics (powered or unpowered)

Leg/foot orthotics (powered or unpowered)

**Somatosensory/motor-oriented devices** – choose combination of one item from each column and specify the condition:

|  |  |  |
| --- | --- | --- |
| **Signal source** | **Effector** | **Condition** |
| Peripheral nerve | Prosthetic | Paraplegia (partial/complete) |
| P300 speller | Orthotic | Tetraplegia (part./comp.) |
| Targeted muscle reinnervation | Wheelchair | Quadriplegia (part./comp.) |
| SSVEP | Robotic limb | Amputation |
| Electromyography (EMG) | Computer/cursor | Multiple sclerosis |
| Electromyography (EEG) | Own body | Amyotrophic lateral sclerosis |
| Electrocorticography (ECoG) | Other | Amputation |
| Penetrating microelectrode |  | Congenital missing limb |
| Single unit recording |  | Other |