Localization of Seizure Focus (Epilepsy)

- Medication alone is not effective for 30% of epilepsy patients
- Surgery may then be option
  - Remove seizure focus = area that triggers seizures
  - Where is the focus located?
  - Invasive recordings on brain surface (grid electrodes)
- Relies on seizure EEG → LONG hospitalization
- Our approach: non-seizure EEG instead of seizure EEG
- Mathematical decision making algorithms

Diagnosis of Alzheimer’s Disease from EEG

- 2-5% of people over 65 years old have AD
- EEG is inexpensive, portable, simple → screening test for AD
- Extract EEG patterns typical for AD (e.g., slowing)