



Legend

○ **Actors:** Patient, Clinician/Neurologist

○ **Supporting Functions:** Data processing, ML training

— **Include:** Required dependency

○ **Primary Goals:** Core system functions

— **Association:** Actor uses function

— **Extend:** Optional extension

Parkinson's Telemonitoring Project Goals:

- Remote disease severity prediction — predict Motor and Total UPDRS scores from voice features
- Voice biomarker identification — extract 16 acoustic parameters (jitter, shimmer, NHR, HNR, RPDE, DFA, PPE, etc.)
- Longitudinal tracking — monitor disease progression over time for 42 patients using 5,875 recordings
- Telemedicine viability assessment — evaluate if voice-only data can reliably support remote patient monitoring
- Non-invasive monitoring — replace clinical visits with remote voice recordings for patient assessment