Team Name: sdmay24-15

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Report Period: 09/18/2023 - 10/9/20223

Summary of Progress in this Period

- Finished project decomposition
- Established milestones for project
- Created project plan
- Recorded presentation for project plan

Pending Issues

Fall Semester:

Research effective metrics, methods, and interfaces
- Research useful datapoints/features for predicting and detectign PTSD attacks
- Research remote communication between dog collar and other devices
- Research methods of remote communication with service animals

Platform research:
- Research accessible methods for urgent notifications (to dismiss PTSD attack notifications)
- Research sensors given useful metrics to predict PTSD
- Research algorithms, and gather data for predicting and detecting PTSD attacks
- Research platforms for service animal collar device

Platform design:
- Define platform for interfacing with veteran
- Define sensors for veteran wearable device
- Identify method of communication between collar and veteran's device
- Define intended method of PTSD notification to dog (shock, vibration, beep, etc)

System Design
- Design UI for veteran (veteran wearable)
- Design sensor interface with algorithm (veteran wearable)
- Design algorithm approach/pattern for prediction (veteran wearable)
- Design dog collar (collar)
- Design communication between collar and algorithm output (collar)

Spring Semester:

Skeleton/individual pieces:
- Create skeleton of user interface for veteran
- Sensor data gathering
- Initial Algorithm implementation
- Prototype collar

Integrations:
- Integrate sensor data with algorithm input
- Integrate algorithm output with user interface (coms)
- Integrate user interface with dog collar (wireless coms)

Full cycle implementation
- Complete first use case (PTSD attack detection and notification)
- Complete dismissal use case (No episode, notification preemptively dismissed)

Plans for Upcoming Reporting Period

Begin next milestone (research)
Begin integrating research results into design plan - decide on sensors.