Our project addresses and resolves three prominent issues that are affecting the lives of the elderly negatively. Among these issues are vision loss, hearing loss, and memory loss.

According to the National Health Interview Survey (NHIS) Preliminary Report, an estimated 21.2 million adult Americans (or more than 10% of all adult Americans) reported having experienced vision loss. From this number, 12.0% of Americans 45 to 64 years of age reported having vision loss, 12.2% of Americans 65 to 74 years of age reported having vision loss, and 15.2% of Americans 75 years of age and over reported having vision loss.

There is also a strong relationship between age and reported hearing loss. There is a strong relationship between age and reported hearing loss: 18 percent of American adults 45-64 years old, 30 percent of adults 65-74 years old, and 47 percent of adults 75 years old or older have a hearing loss.

Additionally, the sixth leading cause of death in the United States is Alzheimer Disease, which is a memory-robbing disease. An estimated 5 million people over the age of 65 years old are affected by Alzheimer Disease in the United States.

We will develop the applications for Google Glass to assist the elder against the above problems:

Vision loss: Using machine learning techniques to analyze the videos and images that are captured by the front camera and provide the guidance to the users. The goal is to substitute guide dogs with software and sensors in Google Glass.

Hearing loss: Utilizing voice recognition techniques to transform the hearing voice to the sign language that performs on the virtual screen of Google Glass.

Alzheimer Disease: The combination of GPS tracking, Google Maps integration, facial recognition and social network can turn Google Glass into a Personal Assistant System for the elders.

These applications will be open source so others can improve them.

The future of technology is moving forward to small and hands-free devices. We want to develop the applications that fit the needs of users and capture the large market share. These applications along with Google Glass can help the elders navigate their world in a safer, more informed manner.

Our software will restore the sight to the blind, heal the deaf, and cure memory loss to a certain extent. We will have a significant impact in the lives of the elderly on a daily basis. From a quantitative perspective the human impact of our software can be as big as 62 million people. From a qualitative perspective we’ll be ameliorating people’s life through technology.