**Executive Summary**

*This section provides an overview to the project. It should briefly touch on the motivation, data question, data to be used, along with any known assumptions and challenges.*

* *This capstone will be about the prevalence of Alzheimer’s disease in the United States and in Tennessee specifically. Having a close tie to Dementia and mental health issues, this is an especially important topic for me. I will be utilizing data from the Center for Disease Control, Alzheimer’s Association, and the National Institute of Mental Health among potential others to form my analysis of the trends of the disease in the United States over the past several decades, if there is a correlation to family history, and are the common factors.*
* *This will be a difficult project for me personally due to long held fears and personal experiences that I have had in interacting with individuals in late-stage cognitive decline.*

**Motivation**

*My motivation for this project is a very personal one. I have had several family members develop dementia. I myself am terrified of the thought of diminishing cognitive function. I have always had a less than stellar memory, and the idea of not knowing who people are or who I am is one of abject terror for me. This is part of why I spend so much of my life always wanting and striving to learn new skills and concepts. In order to (hopefully) stave off potential cognitive decline.*

**Data Question**

Question(s):

1. Does there seem to be an increasing trend or decreasing trend in AD diagnoses? Why?
2. Is there a correlation to Family history?
3. Are there commonalities amongst most frequent developers?

**Minimum Viable Product (MVP)**

*Define your MVP. This should be a description of what your final capstone will look like, including visualizations, how the analysis will be presented, who the intended audience is, etc.*

* *MVP will be a combination of charts (bar, histograms) representing known statistics regarding AD.*
* *Visualizations for US, TN, and Nashville areas.*
* *Potential heat maps for most concentrated areas of cases*

*Presentation would be intended to be directed, not automated as on a web site by itself.*

* *Intended audience: General Public to help gain awareness and try to reduce fear of what it may mean for loved ones, or themselves (which is my fear).*

**Schedule (through 1/7/2021)**

1. Get the Data (29 Nov 2020)
2. Clean & Explore the Data (30 Nov 2020- 7 Dec 2020)
3. Create Presentation of your Analysis (3 Jan 2021)

* Should be a presentation, but could include a Jupyter Notebook or dashboard in Excel, Tableau, or PowerBI

1. Internal demos (1/4/2021)
2. Demo Day!! (1/7/2021)

**Data Sources**

*Document the data you use and the source of that data*

*American Psychological Association -* [*https://psycnet.apa.org/home*](https://psycnet.apa.org/home)

*Alzheimer’s Association –* [*https://www.alz.org/*](https://www.alz.org/)

*2020 Alzheimer’s Disease facts and figures –*

[*https://alz-journals.onlinelibrary.wiley.com/doi/full/10.1002/alz.12068*](https://alz-journals.onlinelibrary.wiley.com/doi/full/10.1002/alz.12068)

*Centers for Disease Control and Prevention-* [*https://www.cdc.gov/aging/data/index.htm*](https://www.cdc.gov/aging/data/index.htm)

[*https://www.cdc.gov/aging/agingdata/index.html*](https://www.cdc.gov/aging/agingdata/index.html)

[*https://chronicdata.cdc.gov/browse?category=Healthy+Aging*](https://chronicdata.cdc.gov/browse?category=Healthy+Aging)

*National Institute of Mental Health -* [*https://www.nimh.nih.gov/health/statistics/mental-illness.shtml*](https://www.nimh.nih.gov/health/statistics/mental-illness.shtml)

*Alzheimer’s Tennessee -* [*https://www.alztennessee.org/*](https://www.alztennessee.org/)

**Known Issues and Challenges**

*Explain any anticipated challenges with your project, and your plan for managing them. Be sure to include:*

* *If you need to request data or an api key*
* *Based on your data sources, known data cleaning steps*

*I do not know of nay data requests or APIs that are required at this time.*

*There will be substantial data cleaning in order to properly collate and combine said data into a usable format.*