# Bhagya Shree Kottoori

LinkedIn | bhagyashree.k@wayne.edu | 248-787-3797

## Education:

**Master of Science in Computer Science** — **Expected Graduation:** Dec,2022
*Wayne State University, Detroit, MI* — GPA-3.89
*Concentration: Machine Learning/Data mining*

**Master of Arts in Mass Communication and Journalism** — **Graduated**: June,2016
*Osmania University, Telangana, India* — GPA- 3.6

**Bachelor of Engineering in Computer Science Engineering** — **Graduated:** April,2014
*Jawaharlal Nehru Technological University, Telangana, India* — GPA- 3.4

## Technical Skills:

*Programming:* Python, R
*Machine learning:*
Classification: Naïve Bayes, Random Forest, KNN, Decision tree, SVM
Clustering: K-Means, DBSCAN, Hierarchical
Deep-learning: CNN, U-Net, GAN, Restnet50
*Libraries:* Pandas, Numpy, scikit-learn, Tensorflow, Matplotlib
*Data Visualization & Tools:* Tableau, Orbit Image Analysis, Weka

## Experience:

**Wayne State University, Detroit, MI- *Student Research Assistant:*** August 2020- Current

**Prediction of Histopathological features in Breast Cancer and Glioblastoma**

- Created, tested, and executed a clear mechanism to extract morphological features associated with breast cancer and glioblastoma projects using TCGA biopsy image dataset.
- Implemented techniques related to Image Processing and used U-Net model for Nuclei segmentation to understand and enhance the diagnosis, prognosis, and treatment decisions.
- Produced a clear processed image dataset for multipurpose use in future from the raw biopsy images.
- Designed a Novel model that helps in understanding visually indistinguishable morphological features associated with Nuclei that further helps to discriminate groups with different tumor aggressiveness.

**Identifying Disease subtypes in Glioblastoma cancer**

**Citation:** ***Zhou, Kaiyue & Kottoori, Bhagya & Munj, Seeya & Zhang, Zhewei & Draghici, Sorin & Arslanturk, S.. (2022). Integration of Multimodal Data from Disparate Sources for Identifying Disease Subtypes. Biology. 11. 360. 10.3390/biology11030360.***

- Examined the data and worked on data cleaning, data manipulation of TCGA modalities dataset and visualized using Machine Learning and Tableau.
- Discovered the relations among the datasets.
- Analyzed the data from TCGA glioblastoma multiforme, acute myeloid leukemia, and pancreatic adenocarcinoma 408 datasets.

## Data Science Projects:

**COVID-19,** *Wayne State University* — **Completed: Winter 2020**

- Created a mechanism to determine survivability rate among different age groups by using classification methods.
- Uncovered the most common symptoms among confirmed & dead cases by using association methods.
- Discovered the pattern classification of each country by using Clustering method.
- Application: Model with an accuracy of 84% can be used in medical domain for understanding the disease spread with the set of symptoms among people to help the medical system understand and prioritize patients.

**Semi-supervised approach to detect distracted driver using driver dashboard images,**
*Wayne State University* — **Completed: Winter 2020**

- Implemented a Semi-Supervised GAN to build a multi-class classification model using both labelled and unlabeled 2D images to distinguish between 10 distracted driving activities.
- Trained the model with 15k labelled and 40k unlabeled data and achieved evaluation accuracy of 94.7%.
- Application: The trained model can be used by OEMs to improve auto safety and semi-supervised image classification reduces the cost of collecting expensive labelled data.

**Data Mining for Automated Personality Classification,**
*Wayne State University* — **Completed: Fall 2019**

- Prediction of user personality was achieved by using different classification algorithms.
- Implementation and comparison of different models was done.
- Application: Model can be used for any marketing companies to understand user personality.