**Project Design Phase-I**

**Solution Architecture**

| Date | 06 May 2023 |
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| Team ID | NM2023TMID18886 |
| Project Name | Cancer vision : advanced breast cancer prediction with deep learning |

**Solution Architecture:**

Solution architecture is a complex process – with many sub-processes – that bridges the gap between business problems and technology solutions. Its goals are to:

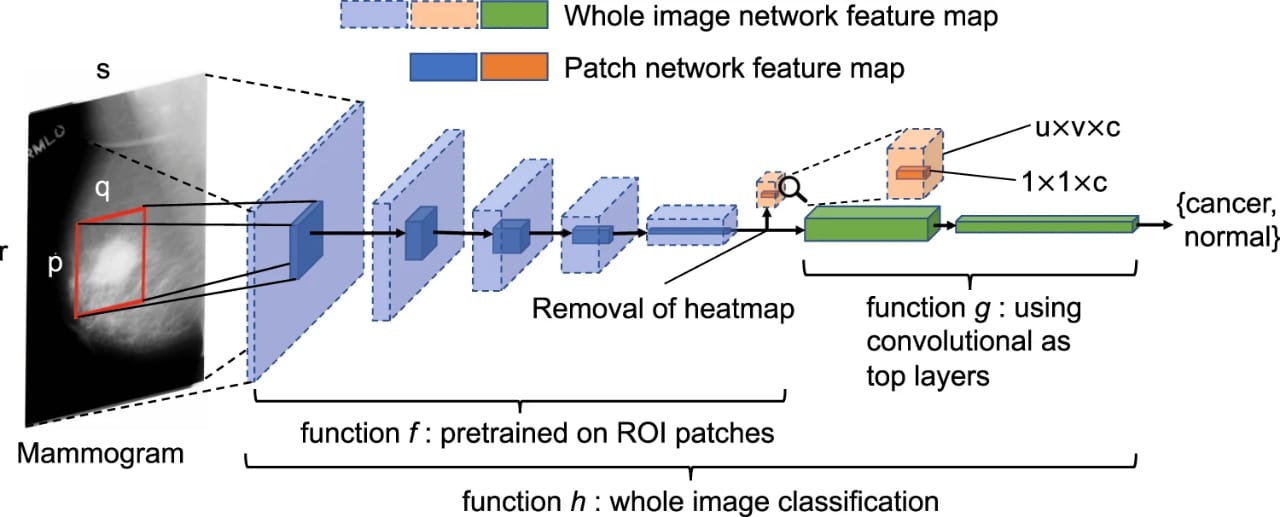
* **Improve breast cancer detection on screening Mammography:**

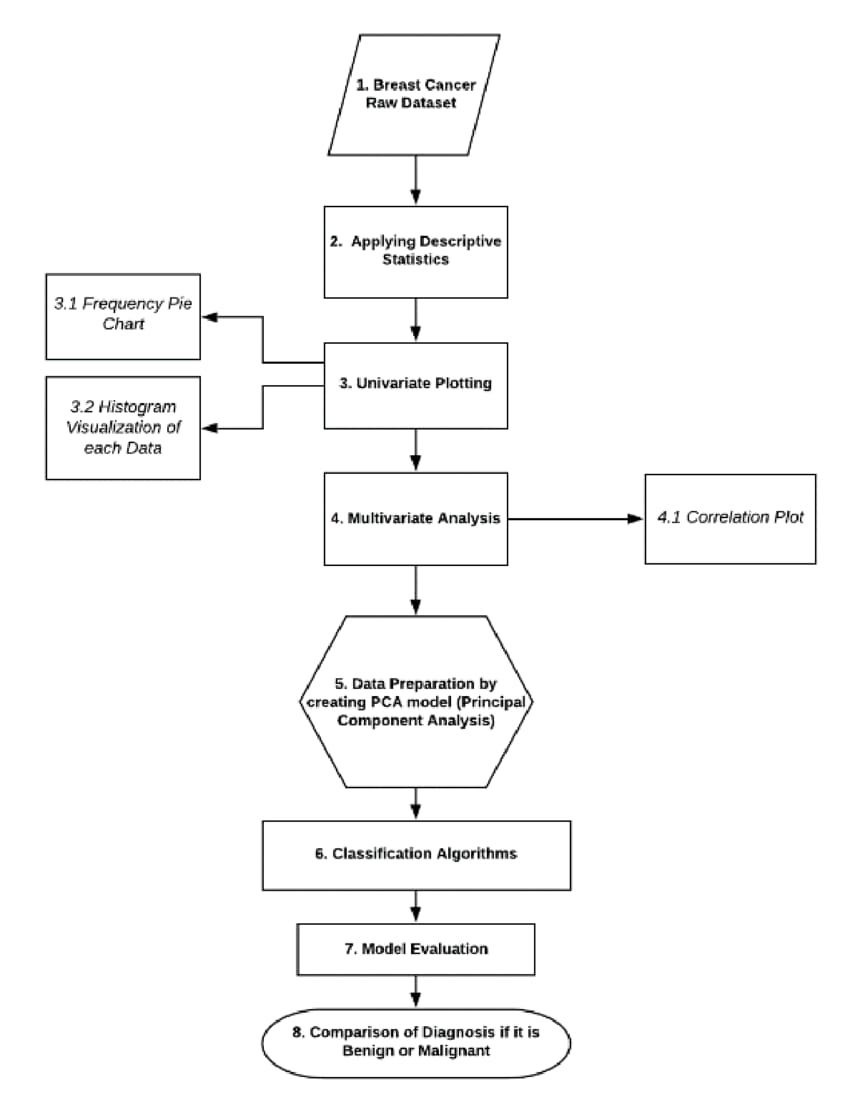
The rapid advancement of machine learning and specially deep learning continues to fuel the medical imaging community ‘s interest in applying these techniques to improve the accuracy of cancer screening .

Detection of subclinical breast cancer on screening mammography is challenging as an image classification task because the tumors themselves occupy only a small portion of the image of the entire breast .

* Describe the structure :Network design : The modern CNN is typically constructed by stacking convolutional layers on top of the input ,followed by one or more fully connected layers to join with the classification output.
* **Set up of processing of the dataset :**

The IN breast dataset is a public database containing more recently acquired FFDM images.These images have different intensity profiles compared with digitized film mammograms from the CBIS-DDSM ,as illustrated ,therefore IN breast provides an excellent opportunity to test the transferability of a whole a image classifier across mammography platforms.

**Example - Solution Architecture Diagram****:**

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