**Model Development Phase Template**

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| Date | 02 October 2024 |
| Team ID | 740031 |
| Project Title | OptiInsight - Revolutionizing Ophthalmic Care With Deep Learning For Predictive Eye Disease Analysis |
| Maximum Marks | 10 Marks |

**Initial Model Training Code, Model Validation and Evaluation Report**

Implemented a CNN using TensorFlow/Keras to train deep learning models for age and gender prediction and ophthalmic disease analysis. The models were validated with a 20% test split, achieving 85% and 92% accuracy, respectively. Evaluation metrics, including precision, recall, F1-score, and confusion matrix, demonstrated strong performance and minimal overfitting.

**Initial Model Training Code (5 marks):**

Paste the screenshot of the model training code

**Model Validation and Evaluation Report (5 marks):**

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| **Model** | **Summary** | **Training and Validation Performance Metrics** |
| Model | The model utilizes a pre-trained VGG19 architecture with imagenet weights, excluding the top layers. All layers in VGG19 are frozen (trainable=False), ensuring the pre-trained weights remain unchanged. The flattened output of VGG19 serves as the input for the custom classifier to be built. |  |