Project Design Phase-I
Solution Architecture

Date	15 November 2023
Team ID	PNT2022TMID591573
Project Name	Project – Deep Learning Model for Eye Disease Classification
Maximum Marks	4 Marks

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:

- Find the best tech solution to solve existing business problems.
- Describe the structure, characteristics, behavior, and other aspects of the software to project stakeholders.
- Define features, development phases, and solution requirements.
- Provide specifications according to which the solution is defined, managed, and delivered.

Solution Architecture Diagram:

The optimal solution for eye disease prediction employs a sophisticated Convolutional Neural Network (CNN) architecture with advanced features, including spatial pooling, global average pooling, and interpretability modules. Robust preprocessing enhances model performance, while diverse and annotated datasets ensure its adaptability to various demographics and eye conditions. Integration of dropout in dense layers prevents overfitting. The system is designed for scalability through parallel processing and distributed computing, supporting real-time inference for seamless integration into clinical workflows. Continuous monitoring and updates, along with efficient integration into healthcare systems, make this solution the best approach for accurate and timely eye disease prediction.

Solution Architecture Diagram: