ANNEXURE – II

PARUL UNIVERSITY

FACULTY OF ENGINEERING AND TECHNOLOGY
COMPUTER SCIENCE AND ENGINEERING DEPARTMENT

PROJECT IDENTIFICATION EXERCISE (PIE)

1. Group Information

SR NO	NAME OF THE STUDENTS AND SUPERVISOR	ENROLLMENT NO.	DEPARTMENT	PHONE NO.	SIGNATURE
1	NIRAJKUMAR D. TIWARY	150305105112	Computer Science & Engg.	(+91) 8460776216	

2. Group Information

Group Strengths	Group Weaknesses
SUFFICIENT KNOWLEDGE OF THE FIELD AND THE TOPIC.(Neural Networks and Image Processing)	GROUP MEMBERS ARE LESS SO MIGHT FACE PROBLEMS IN MATCHING WITH THE DEADLINES.
MORE FOCUSED AS IT IS A PERSONAL INDIVIDUAL PROJECT.	BECAUSE IT IS A INDIVIDUAL PROJECT, IDEAS WHILE IMPLEMENTING THE SOLUTION MIGHT NOT BE DIVERS.
POSSESS PREVIOUS EXPERIENCE WITH THE TECHNOLOGY AND THE TOOLS REQUIRED FOR THE PROJECT.(Deep Learning, Python, TensorFlow)	DON'T HAVE EXPERTISE IN MEDICAL IMAGING OBSERVATION SO WILL REQUIRES SOME HELP FROM A OPHTHALMOLOGIST.

3. Project Topic Knowledge

Criterio	Remark
Constraints	**TIME**: AROUND 4-5 MONTHS **COST**: MIGHT NEED SOME GPUs OTHER THEN THAT **NONE**. **SCOPE**: CAN IMPROVE CRITICAL MEDICAL DECISIONS MADE BY DOCTORS BY 16 – 20% (SPECIALLY DIABETIC RETINOPATHY)
Understanding of the Issue	Diabetic retinopathy is the major cause of blindness in the world and many patients loses their vision because of this doctors are very skilled but they also make mistakes in this type of work machine are more trustable than humans.
Is the Project Topic already extensively investigated?	Yes, this issue has been investigated by different organisations but Delhi still a pretty big scope of improvement as newspapers are published everyday and they are showing some great improvements.
Likely Problems / Research Limitations in the proposed project	The main problem which we can face is getting our hands into quality data as we know medical records are very controversial and personal data and hospitals and clinics are not ready to give away that still we have able to find some non-profit organization which have collected this data for research purposes.

4. Topic Selected

Type of Project: Industry / In house (Category – IV) (Refer Guidelines point 2.5 for Categories)

Title of the Project Identified	EyeNet
Aim:	Detecting Diabetic Retinopathy With Deep Learning
Objective(s):	Diabetic retinopathy is the leading cause of blindness in the working-age population of the developed world. The condition is estimated to affect over 93 million people. The need for a comprehensive and automated method of diabetic retinopathy screening has long been recognized, and previous efforts have made good progress using image classification, pattern recognition, and machine learning. With photos of eyes as input, the goal of this capstone is to create a new model, ideally resulting in realistic clinical potential. The motivations for this project are twofold: 1) Image classification has been a personal interest for years, in addition to classification on a large scale data set. 2) Time is lost between patients getting their eyes scanned (shown below), having their images analyzed by doctors, and scheduling a follow-up appointment. By processing images in real-time, EyeNet would allow people to seek & schedule treatment the same day.
Methodology:	1. Collect quality Data. 2. Do Exploratory Data Analysis. 3. Do Data Prepossessing. 4. Build model using Keras, utilizing TensorFlow as the backend. 5. Train the model. 6. Test the model. 7. Create a front-end for the project. 8. Create an android app for the project.
Are the environmental and societal implications arising out of the proposed project?	NO

5. PROJECT FEASIBILITY AND SUPERVISOR'S CONSENT (To be completed by the supervisor)

Points	Details for verification	Yes / No
Title of the Project Identified	Is title of the proposed / identified project, found to be appropriate, relevant and finalized after supervisor's consent?	
B. Tech. level challenge	Does the Project Proposal submitted have adequate and achievable challenge levels of B.Tech.?	
Facilities, software and infrastructure	Are equipment / facilities required for doing this project available at institute? If not, are alternate arrangements possible?	
Time lines	Will 2 Semesters (Project 1 / I + Project 2 / II) be adequate for achieving all the objectives mentioned in the proposal?	
To which area group does the proposed project belong?		

Name and Signature of the Supervisor with Date: