* Detailed explanation of the proposed solution
* Ultrasonic Tonometer to measure the pressure
* Microcontroller (Arduino Uno) to process the information
* How it addresses the problem
* Cost-efficient and portable design
* Smart connectivity to phone for storage and future access of data
* Non-contact to prevent infections and discomfort
* Innovation and uniqueness of the solution
* Ultrasound acoustic Tonometry to avoid eye irritation
* Compact hand held design to improve convenience
* Highly cost efficient and fast compared to the current solutions
* Technologies to be used (e.g. programming languages, frameworks, hardware)
* Programming Languages: Embedded C
* Hardware: T04 transmitter, Arduino, LCD- 16x2, Receiver
* Methodology and process for implementation (Flow Charts/Images/ working prototype)
* Sketch of the diagram/ CAD model and Circuitry
* Analysis of the feasibility of the idea
* Ultrasound Tonometry is an emerging field with References-
* Research papers supporting the idea-
* Potential challenges and risks
* Not enough market exposure and awareness
* Background/ Research data to improve accuracy and as a database
* Manual alignment may not always be perfect
* Strategies for overcoming these challenges
* Increasing awareness about glaucoma to detect the disease early.
* The device's accuracy and reliability will compensate for the lack of an existing database, generating its own high-quality data as it gains market adoption.
* Exploring auto-align to improve design and accuracy
* Potential impact on the target audience
* Simplifies and enhances glaucoma detection
* Drastically reducing cases of blindness caused by glaucoma
* Benefits of the solution (social, economic, environmental, etc.)
* Efficient and easier workflow for doctors as they need not check every patient
* People at risk can be easily identified and appropriate care can be taken
* Long-term investment with no disposable parts
* Details / Links of the reference and research work
* Green links of Spreadsheet