# Comparison of Image processing software:

## MATLAB vs PYTHON

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| MATLAB   * Requires proper computer system to execute programs * For real time image processing it runs slower as its code is written in higher level so it had to be converted to lower level first then executed. * Commercial software that comes with standard libraries which have less functions, and extra tool kits cost more * Doesn’t have vast range of datatypes * Difficult to program * Consumes more power because desktop computers are not feasible for low power applications * Consumes large area | PYTHON   * Works perfect with mini-computers such as Raspberry Pi * For real time image processing like in our case it runs faster as the program is coded on C++ level. Also OpenCV library is specially designed for image processing. * Open source software with extensive libraries for different functionalities and online support * Powerful datatypes that let organize data easily * Easy to program because it doesn’t require namespaces, so it takes less time to code * Consumes less power * Consumes less area as it as small as a mobile phone |

MATLAB provides a costly solution (Desktop PC + Commercial Software) although it does give better results but as a whole that performance is not worth its price.

# Comparison of IOT Platform:

## ARest vs FireBase

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| Azure & Arest   * API and excess methods include JDBC, ODBC and ADO.NET which use windows interface despite the fact that is slow and in-efficient for smart phones etc * Because of windows interface, it is more exposed to viruses and network attacks * Does not update notifications in real time * A bit difficult to implement and connect with large networks. Suitable for systems which does not require real time updates and changes | FireBase   * API and excess methods include   Andriod, iOS and JavaScript which are mostly used in mobile devices. So it is easier to connect with smart phones   * Uses advanced security measures and updates patches accordingly. * Automatically receives updates with new data and update them in real-time * Easy interface for programmer and user, provides fast response because it is better in applications which require real time updates |