# Project Progress Report A

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| **Project Title** | GPS Autonomous bot; K.J. Somaiya College of Engineering |
| **Project Members** | 1. Aditya Godambe (1311020)  2. Chinmay Karanjkar (1311028)  3. Ashutosh Mahajan (1311033) |
| **Reporting period** | Dates covered by report (e.g. Mar-Sep 07) |
| **Section One: Problem Definition** | |
| * Problem Definition - GPS Autonomous Bot, aka GABot, is a prototype of GPS based driverless vehicle. The GPS here will guide the vehicle from its source to destination. A camera will act as an eye that will capture a video of the path ahead. This video will be then evaluated for obstacle identification. A laptop will be used as the mandatory processor, which will ascertain the non-involvement of any human. * Scope – The bot will mounted with a camera at front which will record a video of the surroundings. It shall then splice the video into frames where each frame will be analysed to detect the presence of obstacles. Depending on the situation, the car will decide its movement. Situations include – Obstacles, road signs and symbols. | |
| **Section Two: Activities and Progress** | |
| Report on activities as outlined in your work packages for the period covered by this report and describe any changes to this, including the reasons for these. Do include any additional activities undertaken that are not in your work packages, providing the background to their inclusion. | |
| **Section Three: Financial Statement** | |
| None. | |
| **Section Four: Outputs and Deliverables** | |
| We have implemented the background subtraction algorithm to a limited dataset and have gotten results that can be further improved using morphological operators. | |
| **Section Five: Outcomes and Lessons Learned** | |
| We have studied several image processing techniques used in research and daily life applications such as traffic situations, medical imaging, etc. We have studied different approaches used for digital imaging, enhancement, object detection and blob detection. | |
| **Section Six: Dissemination** | |
| None | |
| **Section Seven: Risks, Issues and Challenges and Constraints in all context** | |
| Report on any issues or problems that have impacted on the development and implementation of the project during the reporting period. Detail what impact any issues may have on the achievement of project targets, and set out how you plan to tackle these issues. Report on any unexpected project achievements. In this section you can list whether there have been changes in risks, whether they have become issues and whether new risks have been identified.  List the constraints in legal, ethical, societal, environmental context for your project. | |
| **Section Eight: Institutional & Project Partner Issues** | |
| None | |
| **Section Nine: Next Steps** | |
| We plan to implement the following steps –   1. Refine the results of the background subtraction algorithm implementation to focus on the intended target. 2. Implement Arduino code to establish connection between the image processing module and the hardware implementation. 3. Test the system using datasets obtained from real-life situations. | |

Comments/Suggestions:

Mentors Signature Expert’s Signature