iGP: Autonomous Car

iGP Module: Autonomous Navigation Brain

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Build an Autonomous Navigation drive system for unmanned vehicles that utilizes the different sensing devices attached to vehicle to extract meaningful information with machine learning algorithms for vehicle localization, positioning, 3D mapping, and collision avoidance.

ANB to control vehicles for Surveillance, Agricultural crops monitoring, Terrain research, and Freights delivery, with autonomous navigation system.

Value Proposition

- Precision farming, Fast Crop monitoring for large scale farms, Vegetation analysis, React more quickly to threats, Estimate crop yields, and Reduce crop damage.
- Aerial Policeman, Crowd Monitoring, Traffic and Security Watch, and Coast Guard.
- Telecom signal coverage survey
- Mineral exploration
- Geophysical surveys

Customer Segment

- Farms.
- Research institutes.
- First Responder agencies.

Key Activities

- Build the sensing system and develop control methods for the vehicle.
- Build navigation system based on machine learning algorithms for mapping and localization.

Key Skills Required

- Excellent Embedded C and H.W interfacing for different sensors and actuators.
- Excellent knowledge of different serial interfaces like SPI, & I2C.
- A very Good knowledge of Embedded Linux.
- Understanding of Linear Algebra, and 2-3D Geometry, Sensing fusion Algorithms, Dynamic control methods, and probability theories.
- Machine learning algorithms, & Image processing.