PA RASPBERRY PI COMPETITION 2022

SCHOOLS, COLLEGES AND CLUBS SUBMISSION FORM

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SCHOOL/COLLEGE/CLUB NAME	Cambourne Electronics and Robotics Club
TEAM NAME	TeamCERC
CATEGORY *(please circle)*	Category 1: Years Category 2: Years Category 3: Years 7-9 Category 4: Years

SUMMARY 500 word summary of your project	**Smart Navigation Last Mile Decision system:** Our solution uses Raspberry Pi and Google API. Delivery driver or delivery company inputs Postcode of delivery address then our solution will finds where electric scooter delivery can be efficient and quicker than Van delivery. Also finds where to park the van helps less congestion and traffic to other road users. In the future, we would love to make this a running web service and possibly make the destinations customisable with just some inputs and no need to change the code manually, also we would love to include some hardware that's quite simple such as a small hand held device 3D printed that drivers can wear like a satnav that can tell them more information such as delivery points and a map for navigation. Satnav's could also include this software module. Please see below link for more explanation of the project and other benefits **https://www.canva.com/design/DAE6mH5o8AQ/q19L23WZ-y5FfQ2ztCKuEQ/view?utm_content=DAE6mH5o8AQ&utm_campaign=designshare&utm_medium=link&utm_source=homepage_design_menu**
PROOF OF WORKING This should be **photos** and a **video** to show your entry working	https://www.youtube.com/video/9BkWjV7hP90
SOFTWARE & HARDWARE Materials you used to get your project working. Must be within £100 (see rules)	Just Raspberry PI
SOURCE CODE For the new software you created	https://github.com/vivek-kommi/Smart-Navigation-using-Raspberry-Pi-Google-Maps-API https://github.com/vivek-kommi/Smart-Navigation-using-Raspberry-Pi-Google-Maps-API/blob/main/main.py

INSTRUCTIONS Provide written instructions explaining how your project could be recreated using this software, hardware and code.	1) For this you will not need any external hardware except the raspberry pi environment 2) First you would need to go to your google workspace and create a google maps API and once published, get the API key and replace it with the one provided on line 15 3) Then go on to the Linux terminal and install the following libraries: pandas, geopy, googlemaps 4) Then you can use the provided locations or manually change them if needed 5) After that, your code will be fully-functional