Project Raphael

Our vision is to build an intelligent inspection solution to save people lives and make people lives easier.

The team is building a multi-sensory real time analytic inspection software solution on drone. The technology can be applied to different inspection scenarios and different industry sectors ranging from infrastructure inspection to building exterior inspection, train exterior compartment inspection, rails inspection and aircraft exterior inspection, basically to all kinds of surface inspection to identify cracks, water leakage, and real time dimension measurements like length and depth, thermal change of surface. Drone is used as a vehicle installed with HD camera and 3 different types of sensors for inspection, namely infra-red, sonar and LiDAR sensor. By using LiDAR sensor, a 3D mapping can be constructed in real time and provide all dimensions of measurements on 3D models. By leveraging on infra-red sensor, thermal change of the surface, like water leakage, surface cracking can be detected. Sonar sensor is used to inspect the inner structure. Inspection data will be synchronised and shared across different relevant parties in the cloud platform for real time analysis and reporting. It can save more than 50% in cost and time than existing inspection process.

The team provides the software solution and inspection service based on a subscription model for corporations and B2C customers like home owners. They target to roll out the product to the rail and train sectors first, then to building inspection, then to aviation inspection.

About the team

Two team members are Harris Sun (right in photo) and Dr Data Ng (left). Harris graduated in Computer Science at HKU and is the founder of a software company. He was one of the founding members in the innovation centre of Cathay Pacific Airways. Dr. Data graduated with a PhD in Physics at HKU. He is the owner of a 3D printer manufacturer startup company. Project Raphael is the 2nd venture of them. Project Raphael has been in incubating in two accelerator programs in HK (Brinc) and Barcelona (ReimageDrone).