

RZ Ecosystem Partner Solution

QuEST Smart Helmet AI Reference Solution



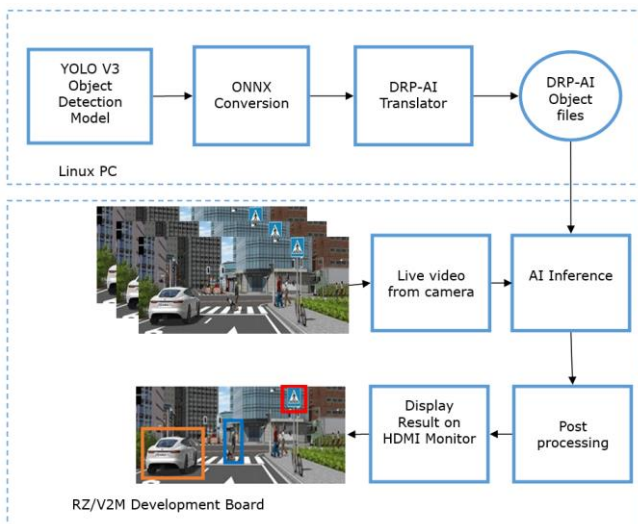
Solution Summary

Renesas:QuEST Global partnership allows our experts to leverage the power of RZ's advanced AI Platform to create next-generation solutions in vision, speech, time-series for our customers. To show case the AI capability of [RZ/V2M](#) in a platform, Quest Global developed a "Smart Helmet" PoC solution which can conduct object detection on the road.

Features/Benefits

- Yolo v3 based deep learning model
- Trained using COCO dataset
- Real time object detection capabilities
 - Car, Person, Bike, Truck, Bicycle, Train, Traffic signal and Four-footed animals
- Could be used as a reference solution to start with

Diagrams/Graphics

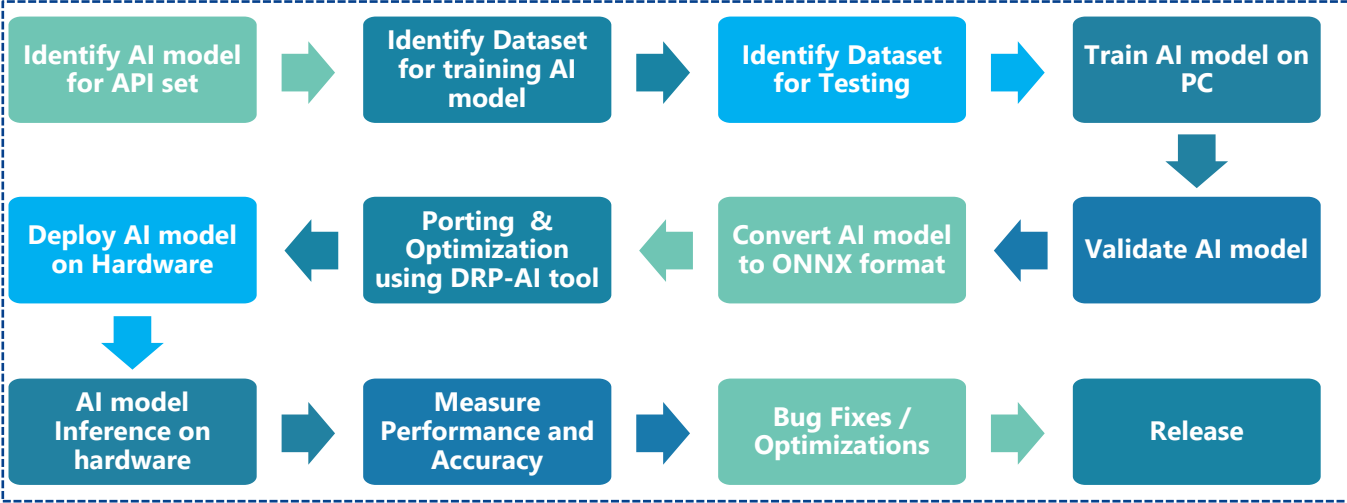


Target Markets and Applications

- Traffic monitoring
- Surveillance, public safety on the road
- Smart bicycle
- Smart helmet for motorcycle



PoC to Productization Journey Supported by QuEST Global



RZ Based PoC Raw Videos

- <https://youtu.be/05plcuVA1Vs> (RZ Demo video1)
- <https://youtu.be/-OUjaaczq2k> (RZ Demo video2)
- <https://youtu.be/rxLYhS6Sos4> (RZ output only)
- <https://youtu.be/vJi8FBS11NM> (RZ output only)

Future Expansion Possibility supported by QuEST Global

Edge AI



- AI Network porting and Optimization on RZ
- Training AI Model using Open or 3rd party dataset
- Improve AI Accuracy to product level
- Multiple Camera to single Edge gateway implementation

AI based Application



- Vision Analytics based Application Development
- Dashboard Development

Cloud Connectivity



- Connect to various Cloud providers including AWS, Azure, GCP
- Leverage Edge + Cloud AI combination
- AI Model update over cloud

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