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# RaY

Research at the University of York St John

For more information please contact RaY at [ray@yorks.ac.uk](mailto:ray@yorks.ac.uk)

# Research & Innovation

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2023 International Conference on Computer  
Communication and Informatics (ICCCI)



By Dr Nalinda Somasiri- Head of Programme Computer Science

23<sup>rd</sup> January 2023

# Our Vision

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- **International Research Community Recognition and Working with Industries**
- **To Achieve Long Term Research Success**
- **Create World-Class Research Facility**

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# Pillars of Research & Innovation



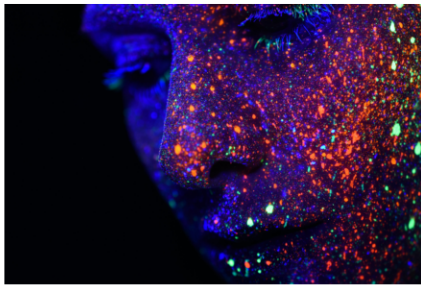
Multidisciplinary: AI, ML, DL, HealthTech, DS, BM, Cyber, Edtech, IoT



Deep-Research: 10 – 20 years life cycle, Innovation

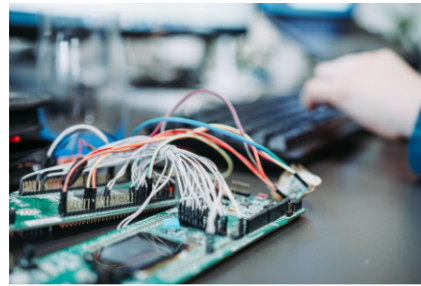


Collaboration: Teamwork, Joint-Research, Research Freedom



AI, ML & Computer  
Vision

- Algorithms for image classification & NLP
- Autonomous Driving Projects
- Agro AI
- Application in Automotive



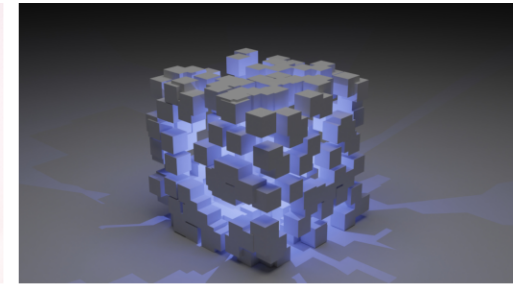
IOT

- Smart home automation
- Health monitoring
- Smart cities
- Connected Cars



Big Data

- Predictive analytics for healthcare
- Social media sentiment analysis
- Fraud detection
- Climate change modelling
- Recommender systems



Blockchain

- Decentralized finance (DeFi)
- Supply chain management
- Medical record keeping
- Land registration

# OUR DATA SCIENCE & COMPUTER SCIENCE TEAM

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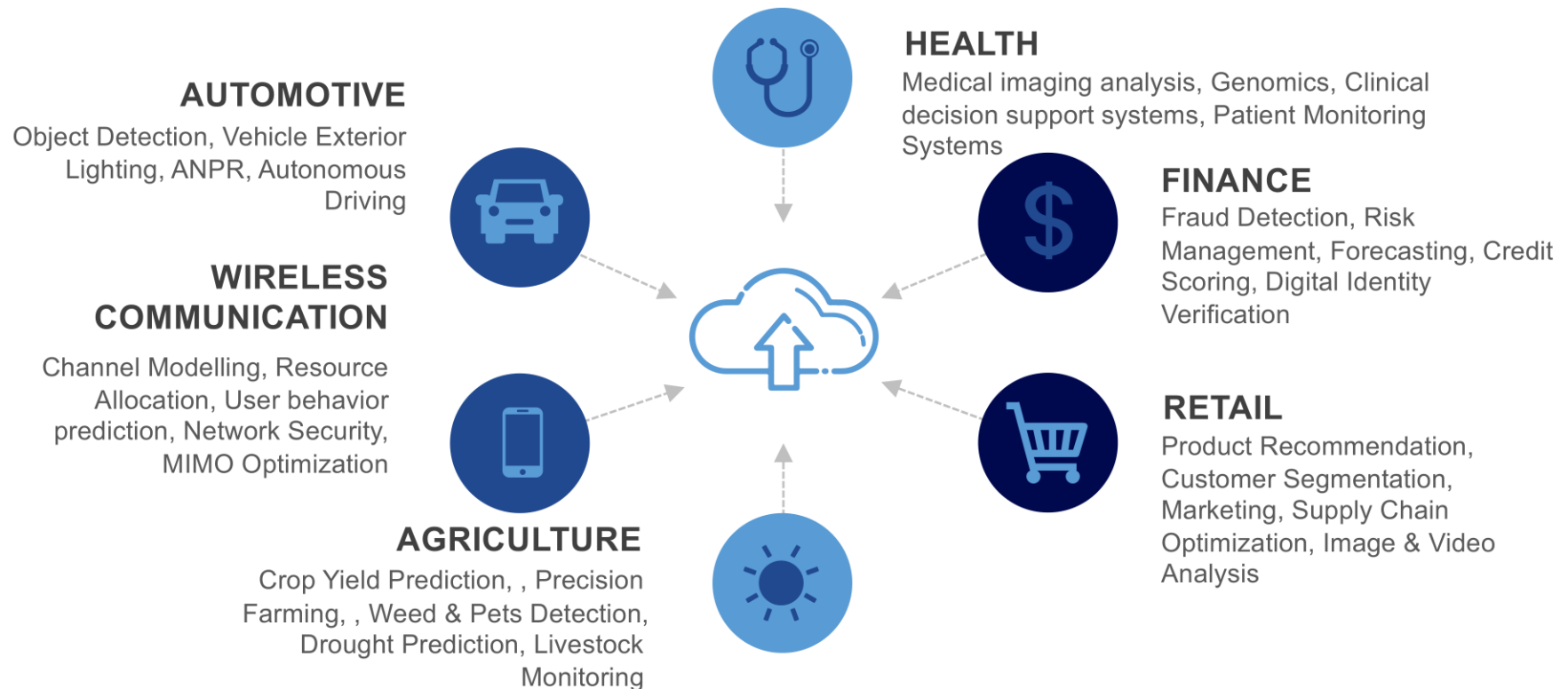


Paragon Research and Innovation is a new multidisciplinary research group. Currently has about 30 researchers

# RESEARCH SECTORS

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## AI & Data Science Research at York St John University

### Collaboration with UK & International Universities



### Collaboration with UK & International Industries



## AI/ML- Object Detection on Adaptive Beam Forming Headlights (ADB)



### Concept Car Solution

7 camera car solution

5 Video cameras

Top Front (in light-bar)

Rear (in rear bumper)

Internal passenger camera

4 ANPR cameras

Front-right

Front-left

Rear-right (side-facing)

Rear-left (side facing)



### Rear Mount Camera



Front Facing Camera



Surveillance Cameras

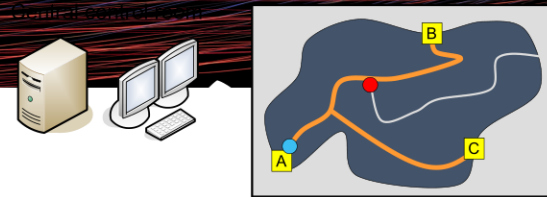


Vehicle Video & ANPR clients



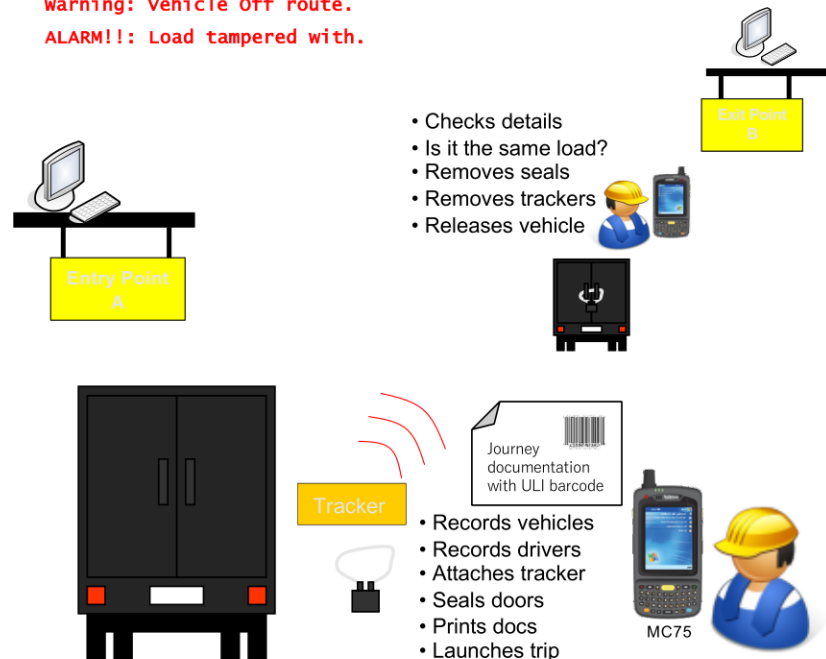
Plate Read in UAE

Abu Dhabi	Ajman	Dubai	Fujairah	Ras Al Khaimah	Sharjah	Umm Al Quwain
76681	AAEYY 88477	F 25978 DUBAI	574 10	32550	64521	2288
73866	2880	H 70857	17202	347	28333	269
1299	2880	79868	5277	12695	69119	
9781	8190	80979	20614	8995	65241	
24881	48765	89210	3352	137	6649	
72789	74051	21846	20	6441	29774	
10948	48608	44840		15333	29834	
1079				4112		
46732						



## Blockchain for Supply Chain Management

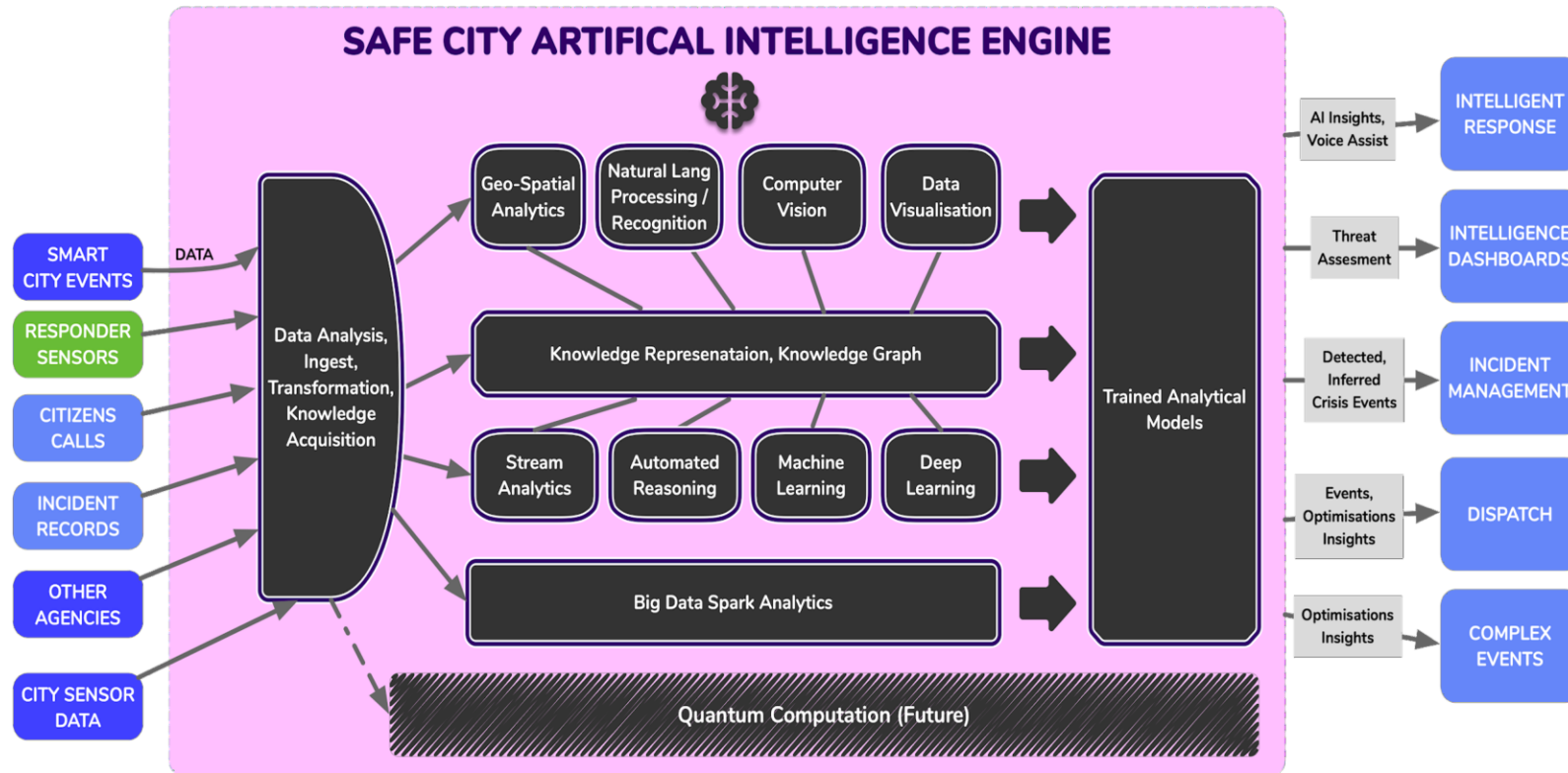
Warning: vehicle Off route.  
ALARM!!!: Load tampered with.



# Smart City Concept

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A photograph of a server room with rows of server racks. Overlaid on the image is a network diagram with a central cloud icon connected to various device icons: a smartphone, a laptop, a desktop monitor, a database cylinder, and a camera lens. The text "THANK YOU" is written in large, white, sans-serif capital letters across the bottom center of the image.

THANK YOU