POLLS CITIES AND REGIONS FOR TRANSPORT INNOVATION

regio arnhem nijmegen

Measuring Impact of Social Distancing at Transport Interchanges

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HUMANISING AUTONOMY 9 #POLIS20

Annual Conference 2020

HUMANISING AUTONOMY

Who we are

We provide camera-based predictive AI that improves the way machines interact with people. Our intent prediction platform fuses behavioural psychology, statistical AI and novel deep learning algorithms to provide real-time analysis on the Edge and in the Cloud.

The software integrates with ADAS systems, infrastructure systems and connected and autonomous vehicles for accident and near miss prevention.

Expertise

Technology, product, and commercial teams with years of experience in artificial intelligence, deep learning policy, embedded engineering, business development, and customer delivery.

Team culture

Passionate and dedicated team of 30 that is growing fast. Diversity is key with 50/50 gender balance across all teams.









COVID-19 Perceived vs Real Risks

Challenges for Municipalities

- Misconceptions
- New policies social distancing?
- Footfall counts
- Drastic changes from norm
- Remote working
- Reduced operational staff

🧐 The Independent

Coronavirus: Is it safe to travel on the tube, bus and train during lockdown?

So is it safe to travel this way during the coronavirus pandemic? ... metal, where Covid-19 lasts the longest – that an infected person may have ... 26 Mar 2020



GOV.UK

Coronavirus (COVID-19): jobs that qualify for travel exemptions

Coronavirus (COVID-19): jobs that qualify for travel exemptions ... UK border in the UK during the period which, but for this exemption, you would ... Drivers of public service vehicles and other employees of community licence ...

5 days ago

BBC News

Covid-19: Fewer than 0.1% fined for no masks on trains

Covid-19: Fewer than 0.1% fined for no masks on trains ... state anyone travelling on public transport must wear a face covering. ... BTP said it did not hold complete data for how many people were stopped during that time 25 Sept 2020











Public Sector & SME Collaboration

Using AI to better understand socially distancing and provide insights for improved future designs.

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NNOVATE UK FUNDING	BUSINESS-LED	PROJECT START:	
£50K (£15K TO TFGM)	INNOVATION IN		

INNOVATION IN **RESPONSE TO GLOBAL** DISRUPTION

1 IUNE 2020

DURATION: 6 MONTHS









Methodology

- 3 top interchanges
- Geographical dispersions
- No capital costs
- 3-6 cameras per location
- Monthly Reports
- Insights Group: Monthly
- Technical Taskforce: Weekly







Metrics

- Total footfall;
- Footfall counts by peak;
- Movement paths;
- Dwelling (using colour gradients to indicate dwelling or walking);
- Number of people within 2m, 1.5m and 1m of another person;
- Possible interactions (less than 5m);
- Duration of interactions for less than 2m;
- Percentage of people who did socially distance (2m, 1.5m, 1m);
- Cluster locations (shown using a thematic image with colour gradient).



Over 1,000 hours of data have so far been analysed.







Visual Outputs







Insights Gathered

Fransport for Greater Manchester

- Interpeak footfall smoothing out after June
- Clustering around main access points, accessing pedestrian crossings and information signs.
- Highest increase in Sept back to school period
- Peaks and troughs reflecting lockdown status











— Bolton **—** Wigan **—** Wythenshawe









Back to School - ^60%









2nd National Lockdown







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Last Supermarket Run?







Validating Outputs









Infrastructure Evaluation



Saturday 11 July



Saturday 15 August



Saturday 19 September

Saturday 10 October



Saturday 6 November





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