



Role for Data Science and Data Analytics in the **#Qldfloods**

Rapid Response Hackathon

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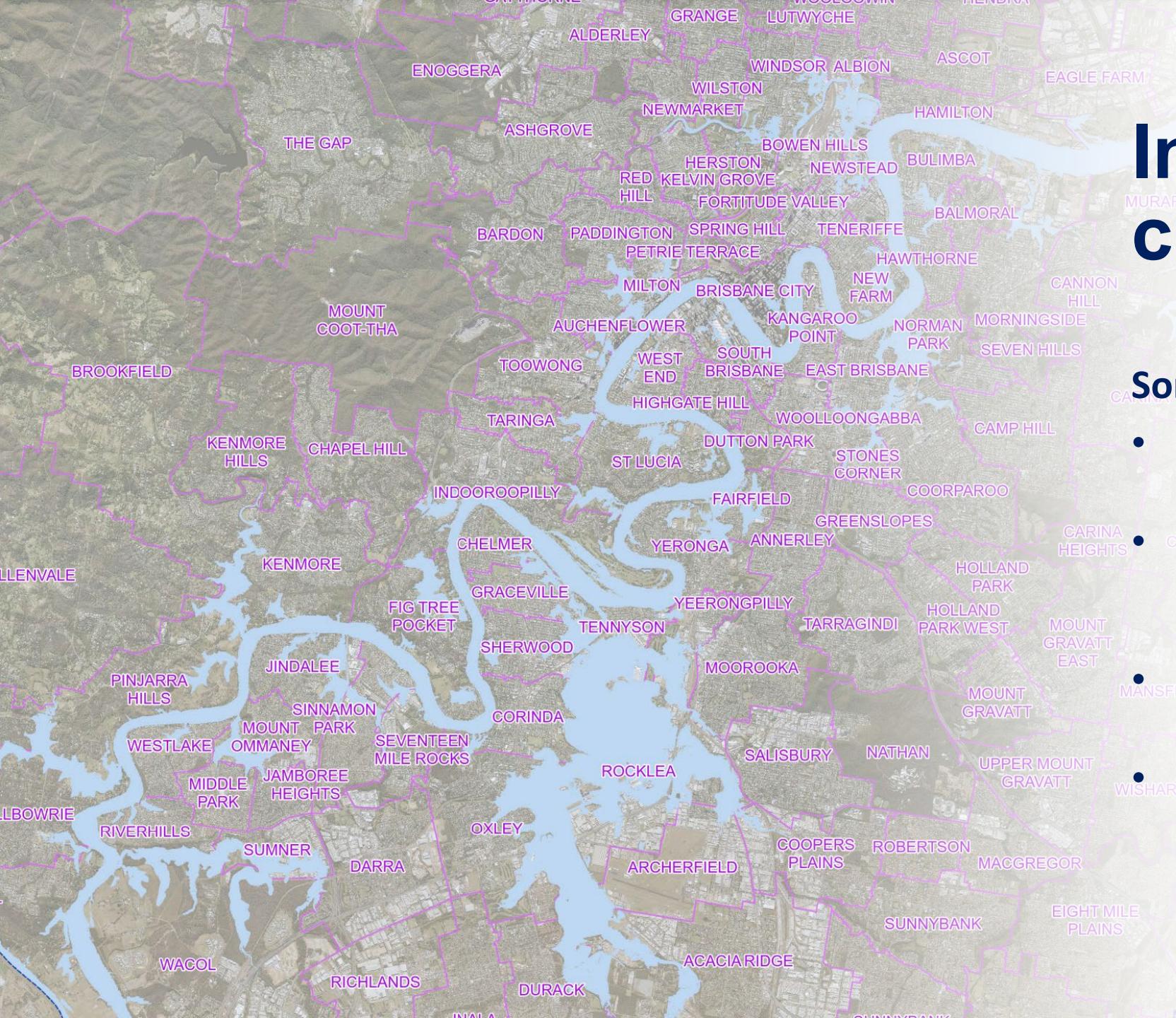


The Queensland University of Technology (QUT) **acknowledges the Turrbal and Yugara, as the First Nations owners of the lands where QUT now stands**. We pay respects to their Elders, lores, customs and creation spirits. We recognise that these lands have always been places of teaching, research and learning

A photograph of a residential street completely submerged in floodwater. The water reaches the lower levels of houses and covers the streets. Utility poles and power lines are visible, standing in the water. The sky is overcast with some clouds. In the background, there are more houses and trees. The entire scene is reflected in the still floodwater.

2022 Queensland Floods

- Feeling of powerlessness
- A lot of watching and waiting
- Sense of frustration
- Widespread criticism
- Community wanted to help



In the communication

Some of what was missing:

- Information was scattered across sources
- Best practice principles for data visualization and displaying data
- Communication of space/time/uncertainty
- Gaps in the observing process
(ie. current road closures)



People could've prepared for the floods better if the impacts of weather forecasts were clearly communicated

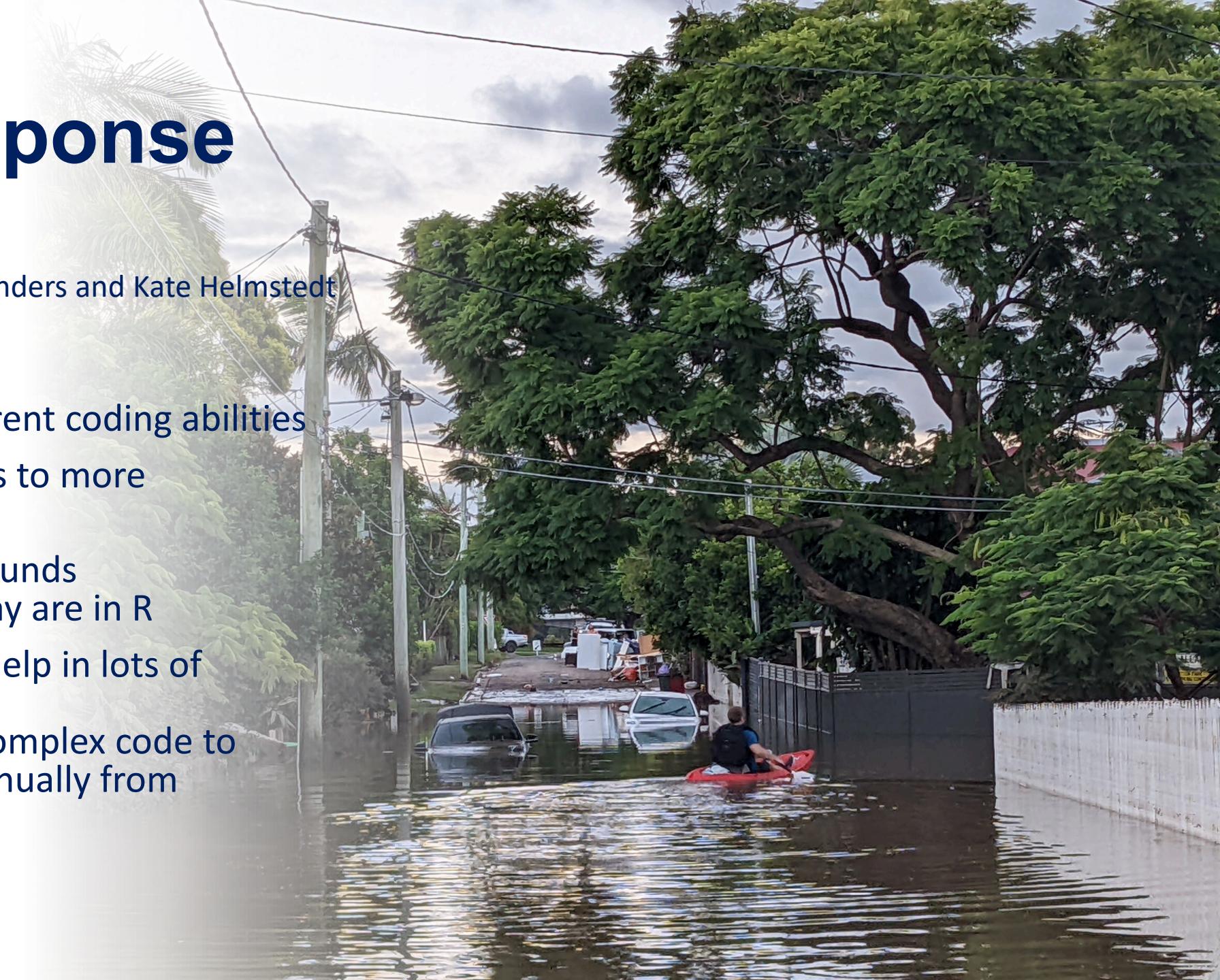
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Conversation article: coauthored Kate Saunders, Kate Helmstedt and Kirien Whan
<https://theconversation.com/people-couldve-prepared-for-the-floods-better-if-the-impacts-of-weather-forecasts-were-clearly-communicated-178309>

Rapid Response Hackathon

Jointly organised by Kate Saunders and Kate Helmstedt

- Put a call out
- People of lots of different coding abilities
- Mix of novice R coders to more experienced coders
- Mix of coding backgrounds
 - not all solutions today are in R
- People mucked in to help in lots of different ways
 - from writing more complex code to downloading data manually from webpages.



Digital Mud Army

- Visualising flood extents



- Real time social media data



- Road Closures



- Visualising past observations



- Individual Vulnerability



Charlotte Patterson

CRICOS No.00213J

A photograph of a street completely submerged in floodwater. In the foreground, a grey metal bus stop shelter stands partially submerged. A yellow bus stop sign is visible behind it, with the text "TRANSLink" and "Preston". The water reaches up to the bottom of the bus stop. Large, mature trees with dense green foliage stand in the background, their trunks partially submerged. Power lines are visible against a clear blue sky. The overall atmosphere is one of a severe flooding event.

**Now let's hear
from the teams**