She saw me and made a face: functional network analysis reveals role of the limbic system in face recognition

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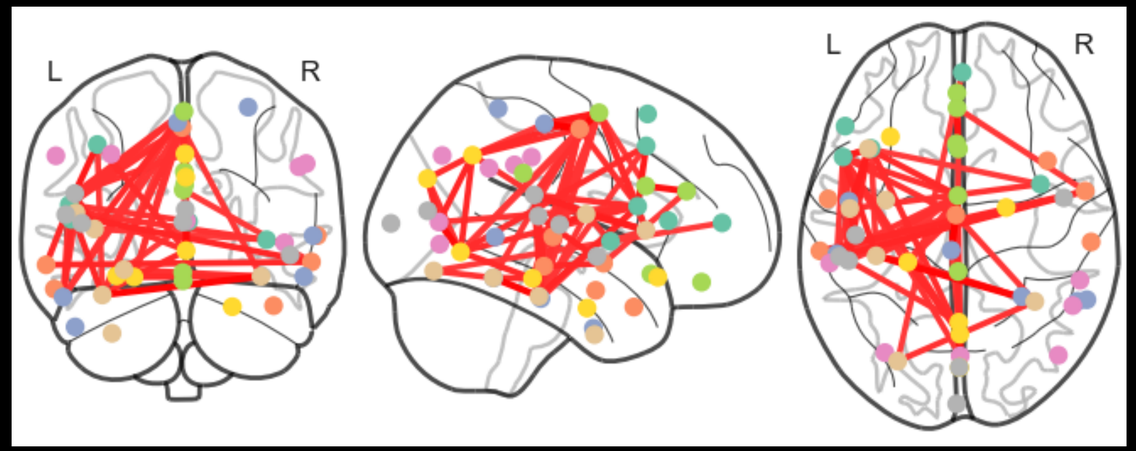
Perceiving a face

- Face perception refers to recognise, understand and act on information from the faces.
- A face provides important social information such as the emotional state and individual identity.
- Face processing is thus related to many cognitive systems such as emotion, action and social cognition

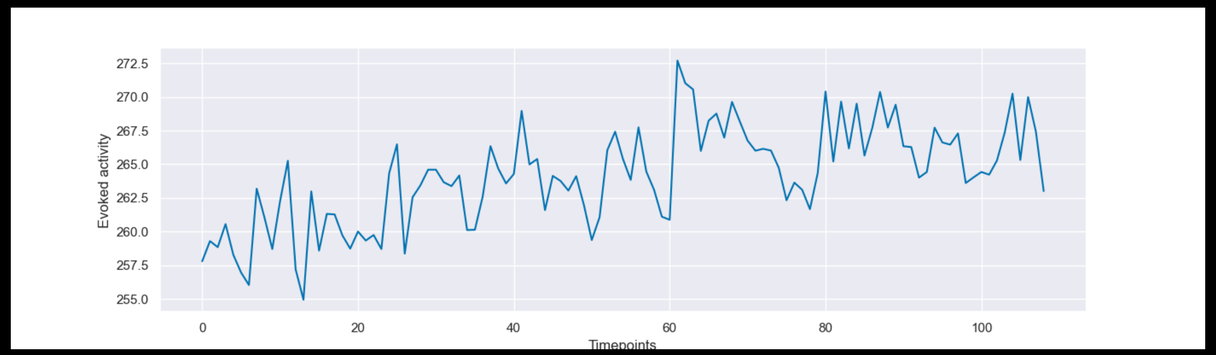
- Infants can recognise faces
- Face recognition is guided and informed by many levels of neural processing
- Goal: To understand the wider brain networks for face recognition and understand their underlying cognitive machinery

Methodology

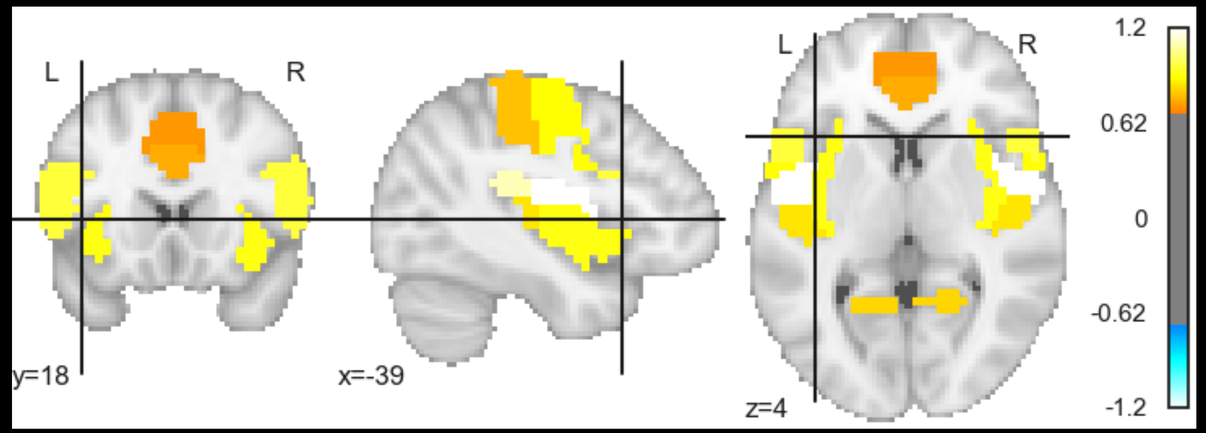
- Generation of timing files of the stimulus provided
- An masker object is created
- Seed region is chosen
- Seed region is masked
- Seed region voxel data is correlated with every other voxel in the brain



Results



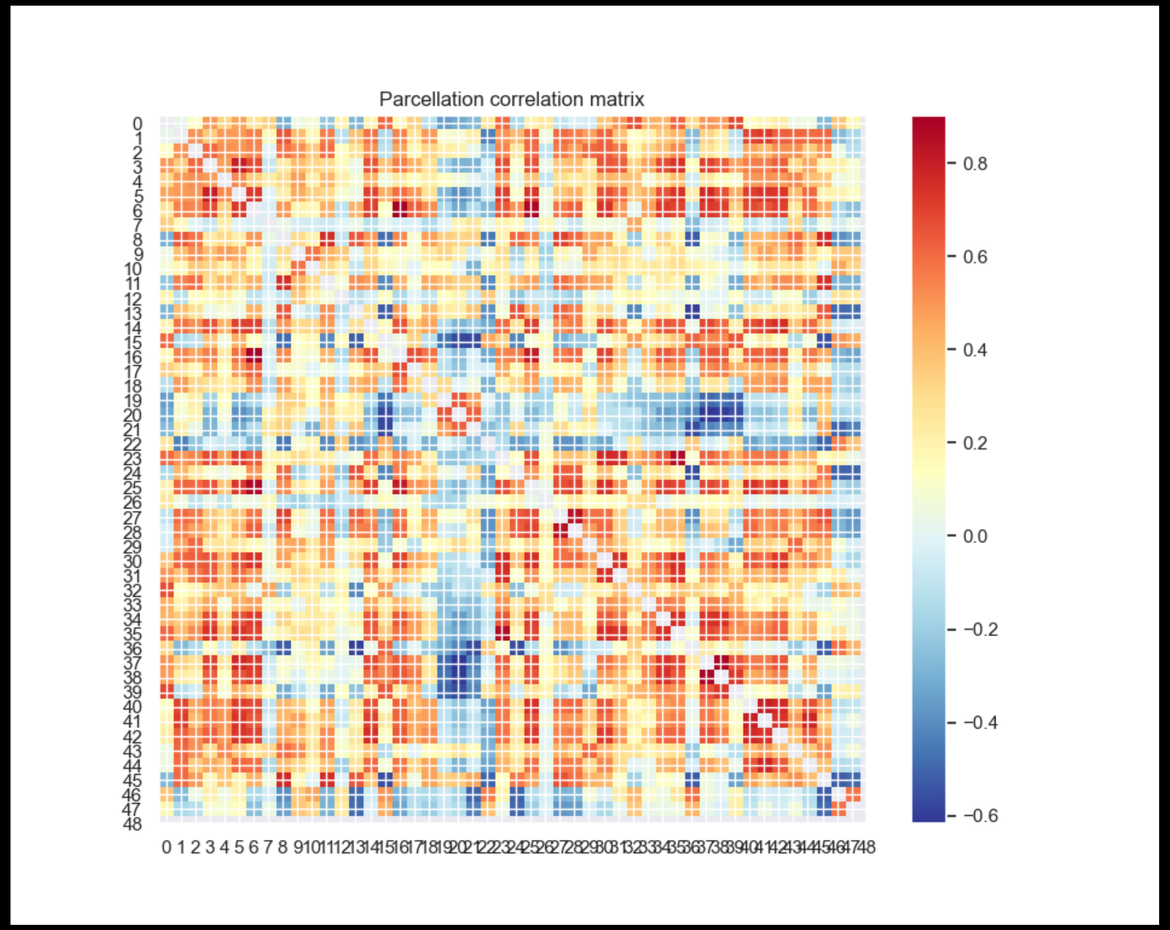
- Plot of one voxel



- Bilateral map of cingulate gyrus,insula,precentral gyrus and caudate nucleus

Conclusion

- Role of limbic system is captured by the activation of cingulate gyrus
- Face perception involves a cascade of of activity of brain regions
- Studying face perception would help understand emotional responses



Thank You