

# Brain Imaging

Psychology

The techniques, what each measures, and the trade-off between them.

*What each technique actually records.*

| Method             | Measures                         | Resolution                    |
|--------------------|----------------------------------|-------------------------------|
| <b>EEG</b>         | Electrical activity at the scalp | Excellent time, poor space    |
| <b>ERP</b>         | Averaged EEG to a stimulus       | Excellent time, poor space    |
| <b>fMRI</b>        | Blood oxygenation (BOLD)         | Good space, poor time         |
| <b>PET</b>         | Radioactive tracer uptake        | Moderate both; invasive       |
| <b>MEG</b>         | Magnetic fields                  | Good time, moderate space     |
| <b>Post-mortem</b> | Structure after death            | Excellent detail, no function |

fMRI measures blood flow, not neural firing — an indirect proxy lagging the activity by several seconds.