Design of EEG P300 Wave Detection using Verilog

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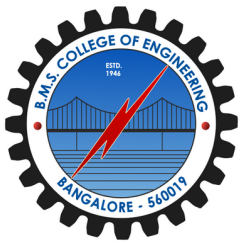
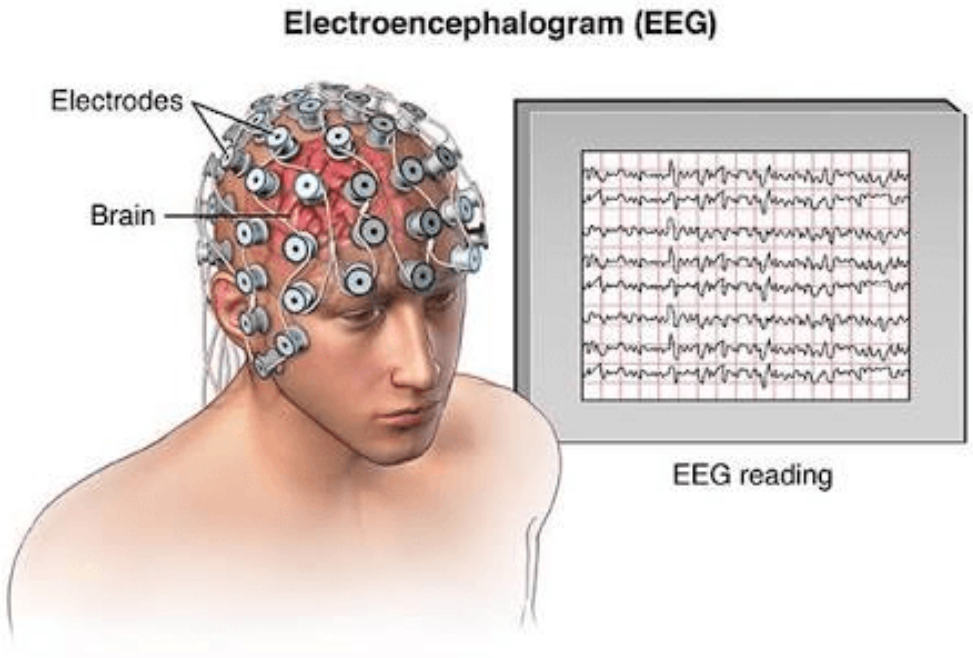
November 25, 2024



Outline

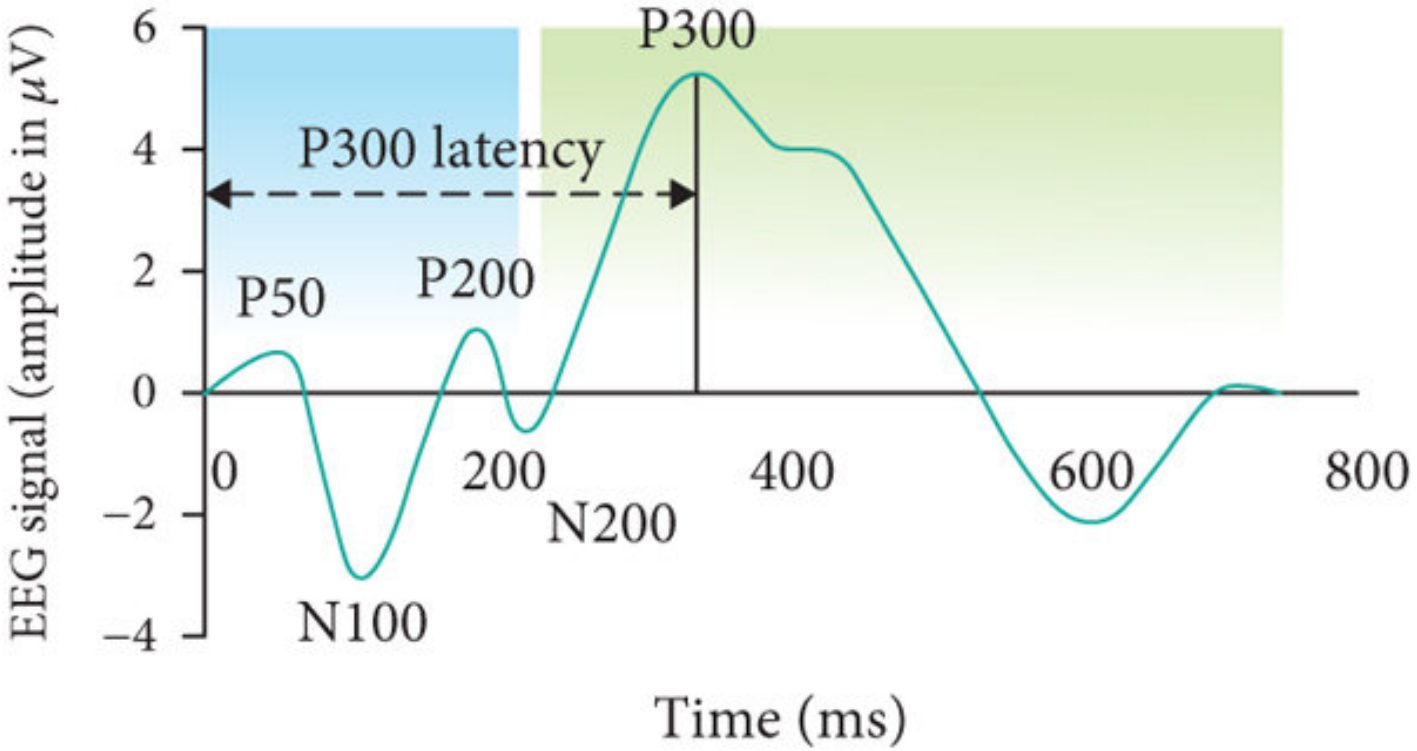
What is EEG?

- **Electroencephalography (EEG)** Measurement of voltage fluctuations caused by neural activity.



What is P300 Wave?

- P300 wave is a **ParietoCentral** Positive Deflection in Human Event-Related Potential (ERP), with a typical **latency of 300 milliseconds** after a stimulus.
- It is associated with attention and decision-making processes.
- A Measure of **Cognitive Ability**.



What is P300 Wave?

- **Objective of the Project:**
  - Design and implement a system capable of real-time detection of the P300 wave pattern using Verilog.
- **Applications of P300 Detection:**
  - Brain-Computer Interfaces (BCIs) for assistive technologies.
  - Neuropsychological studies related to attention and memory.
  - Diagnosing and monitoring neurological conditions.

Problem Statement

Core Question

What challenges does the traditional assessment method face?

- Issues with inclusivity and accessibility
- Lack of flexibility in assessment methods
- Difficulty in assessing applied knowledge

Methodology

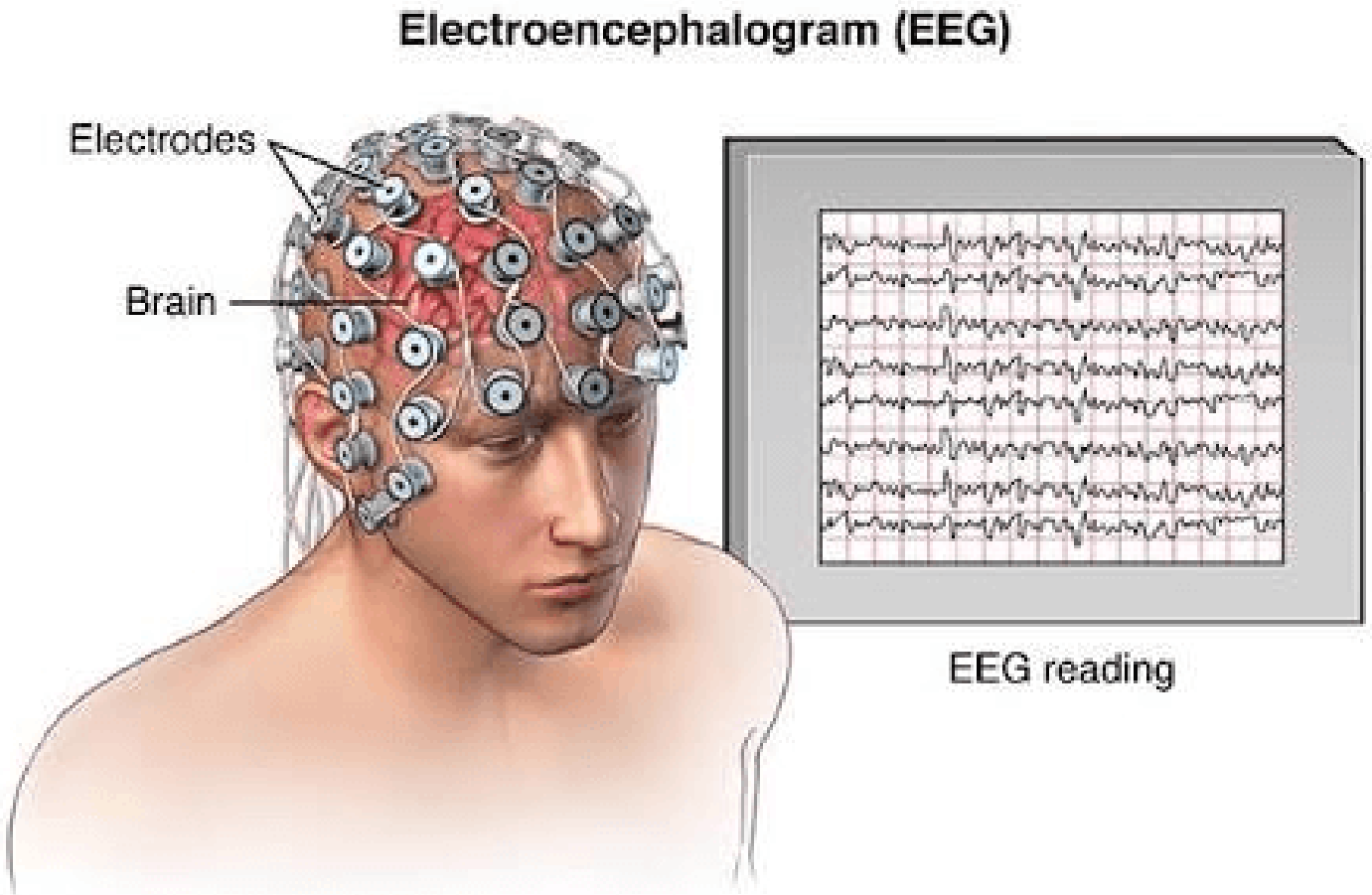
Presenter 2

1. Define clear learning outcomes
2. Develop assessment rubrics
3. Integrate project-based evaluation
4. Provide feedback loops for improvement

Results and Analysis

Presenter 2

- Increased student engagement and understanding
- Greater alignment of assessments with real-world applications
- Enhanced fairness and transparency in evaluations



Conclusion

Presenter 3

- Summary of findings and implications
- Advantages of alternate assessment methods
- Future directions and recommendations

Questions?

Thank You!

Questions are welcome.