

Research Curriculum Vitae

Amaey Advait

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Education

- 2024-present **Indian Institute of Technology Kharagpur (IN), Bachelor of Technology**
Electronics and Electrical Communication Engineering
CGPA: 9.11/10

Research Interests

- NeuroAI • Neuromorphic Computing • Cognitive Robotics • NLP • Human-Centred AI

Projects

- *NeuroSymphony*: Implemented "Models of the brain" in Brian2 by synaptically coupling different neuron models to form a heterogeneous spike train.
- *Brain-Inspired FFT*: Designed a computational model that adapts neural coding principles to create an efficient brain-inspired fast fourier transform algorithm.
- *An Elementary Phonemic Analysis of Tulu*: Collected and analyzed Tulu linguistic data, identifying unique phonemic patterns and contributing to language documentation.

Technical Skills

• Proficiency: Python; MATLAB; Brian2

• Familiar with: C; C++; HTML; LaTeX; Git; Tensorflow; Jupyter Notebook; VSCode

Coursework and Certifications

- Academic Coursework:
Core: Network Theory; Probability and Stochastic Processes; Linear Algebra and Optimization Models; Signals and Systems; Digital Signal Processing-I; Semiconductor Devices; Analog Electronic Circuits
Electives: Programming and Data Structures; Discrete Structures(One of five students selected from the department); Introduction to Language and Linguistics
- Certifications:
 - Supervised Machine Learning, *Coursera*
 - Mathematical Foundations for Machine Learning, *NPTEL*
 - Mindshift: Break Through Obstacles to Learning and Discover Your Hidden Potential, *Coursera*

Achievements

- AIR 1077(Top 0.5%), *JEE Advanced 2024*
- Bronze Medal as a member of the Inter IIT Chess Contingent, *Inter IIT Sports Meet 2024–25*
- Member of the Inter IIT Scrabble Contingent, *Inter IIT Cultural Meet 2025-26(Upcoming)*
- Vocalist(Eastern), Silver winning Band Performance, *General Championship 2024-25, IIT Kharagpur*
- Reporter, The Scholar's Avenue - Independent student-run journalism and media body