

## EDUCATION

**Thapar Institute of Engineering and Technology**, Patiala, Punjab, India

Bachelor of Science in Cognitive Science (Honors), Minor in Psychology | 2023 – 2027 | CGPA: 8.20/10

## RESEARCH EXPERIENCES

**Undergraduate Research Fellow:** [Testing the Mental Timeline Hypothesis in Adults](#)

*Thapar Institute of Engineering and Technology* | Advisor: Dr. Anuj Shukla | Jan 2026 – Present

- Designed, programmed, and analysed a 30-participant pilot study on temporal bisection in OpenSesame, managing the research workflow from study design and data collection through analysis.
- Presented the pilot study's theoretical paradigm at the Thapar International Conference on Student Research (TICSR 2026).
- Honours Thesis (ongoing): Extending the pilot to test whether the observed effect persists when response mappings are reversed while holding the temporal bisection task constant, followed by comparative analysis across mapping conditions.
- Manuscript planned following completion of the Honours Thesis.

**Research Collaborator:** [Marketplace Pilot for Play-Based Learning](#)

*Independent Collaboration* | Mercer University | Advisor: Dr. Karyn Allee | 2026 – Present

- Co-designing a marketplace pilot with 72 mixed-age children examining how culturally relevant, strengths-oriented play may support school readiness in low-SES learners.

**Independent Lab Participant (Online)**

*Child's Play, Learning and Development Lab* | University of Delaware | PI: Dr. Roberta Golinkoff | Sept 2025 – Aug 2026

- Participated in weekly lab meetings across three semesters, critically reviewing assigned research and preparing discussion questions on play-based learning, language acquisition, and joint attention.

**Monitoring, Evaluation and Learning (MEL) Volunteer: Ready to Learn Programme**

*Dost Education* | Forthcoming

- Selected to support Ready to Learn Programme research, data cleaning, and related MEL activities.

**Experimental Psychology Project:** [Effect of Binaural Beats on Attention & Accuracy](#)

*Thapar Institute of Engineering and Technology, Patiala* | Advisor: Dr. Richa Nigam | Aug–Dec 2024

- Led a 5-member team to design and execute a behavioral study (N=15), testing the effect of binaural beat exposure on Stroop task accuracy across high and low anxiety groups.
- Delivered stimulus presentation via PsychoPy and analyzed the resulting data, finding consistent post-exposure improvements in participant accuracy.

## RELEVANT COURSEWORK

- Lifespan Development | Foundations of Cognitive Science | Learning and Memory | Biological Basis of Behaviour | Research Methods | Experimental Methods | Introduction to Statistics | Social Imagination and Cultural Life | Counselling Skills | Data Visualization and Analysis | Data Analysis and Report Writing
- Selected Coursework Project:** 50-page handwritten developmental case study using three years of naturalistic observation (9/10).

## FIELDWORK EXPERIENCES

**Academic Head & Learning Intervention Lead**

*Pratiya Abhiyan* | Patiala, On-Site | August 2023 – Present

- Committed 2000+ hours across 3 years of sustained instruction, 6 days per week, delivering longitudinal academic support to elementary children in a low-SES NGO setting.
- Translated real-time behavioural observations into adaptive, mixed-ability literacy and numeracy interventions for 50+ children in Grades 1–7 each year.
- Delivered longitudinal academic outcomes across 3 years of sustained instruction: a student progressed from 82% to 89.8%, ranking 3rd in class; another's English proficiency moved from C to B across two consecutive years.

**Occupational Therapy & Community Outreach Intern**

*Samadhan India* | Delhi, On-site | June–July 2024 & June–July 2025

- Assisted therapists across Occupational Therapy and Special Education departments in delivering interventions for neurodivergent children across two consecutive summers (2024 & 2025).
- Mentored and onboarded 5 incoming interns into Samadhan's therapy protocols and documentation workflows.

## CONFERENCE PRESENTATIONS & PUBLICATIONS

**Kaur, T.** (2026, April). *Hidden barriers to learning: Sensory filtering and temporal processing in socioeconomically disadvantaged children*. Thapar International Conference for Student Research (TICSR-2026), Patiala, India. [[View Presentation](#)] | [[Read Published Abstract \(PID-293\)](#)]

## CURRICULUM & TOOL DESIGN

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### [Akhar Awaaz](#) | Lead Developer & Researcher

- Designed and piloted a low-cost, multi-sensory phonics application to reduce cognitive load for non-native learners in under-resourced classrooms, deployed to 50+ students.
- Increased on-task engagement from 10 to 35 minutes compared to traditional phonetic instruction.

### [Bolo \(AAC Tool\)](#) | Lead Developer & Researcher

- Developed an icon-driven AAC prototype for speech-delayed and neurodivergent children in low-resource Indian contexts, translating two years of clinical observation into its vocabulary architecture.

## LEADERSHIP EXPERIENCES

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**Udaan 2026: Sapno Ka Carvaan | Main Production Lead:** Directed a month-long collaborative production involving 150 children and 45 volunteers, leading activity planning, volunteer coordination, rehearsals, and on-ground execution.

*Pratigya Abhiyan, Patiala | April–May 2026*

**STEM Conclave 2026 | Lead Facilitator, Student Experience:** Led 45+ volunteers in delivering a university STEM immersion, in collaboration with Sanjhi Sikhiya & Avanti Fellows, for 100 first-generation girls from 25 government schools from Patiala.

*Thapar Institute of Engineering & Technology, Patiala | April 17, 2026*

**Experiential Learning Program | Lead Organiser & Facilitator:** Directed 40+ volunteers in delivering experiential learning activities for 70+ children, including scaffolded sensory and motor activities, contributing to increased daily elementary attendance.

*Pratigya Abhiyan, Patiala | January 2026–Present*

**Foundational Literacy Outreach | Lead Organiser & Facilitator:** Launched a rapid foundational literacy initiative for out-of-school migrant children, scaling daily participation from 3 to 10 students within 72 hours.

*Pratigya Abhiyan, Patiala | 2026*

**Sensory Play Workshops | Lead Organiser & Facilitator:** Independently designed and facilitated two sensory-bin workshops for four children on the autism spectrum, coordinating activities and materials with parents and therapy staff.

*Samadhan, Delhi | June–July 2024 & 2025*

**HeyStory AI Storybook Pilot | Lead Organiser & Facilitator:** Collaborating with UK-based educator Jen Poulton to design an upcoming Indian classroom pilot with 80+ children and 3 teachers across two Grade 5 classrooms, examining how AI-supported interactive storytelling can enhance learning while preserving children's creativity and authorship.

*National Victor Public School, Delhi | 2026*

## ADDITIONAL HONORS

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- BeVisioneers (Mercedes-Benz Fellowship, June 2023 – June 2026):** €3,000 pilot grant, selected from 600+ global applicants, for sustainability education workshops reaching 80 children; represented grassroots pedagogy at a funded summit in Stuttgart, Germany.
- 5th UNCTAD Global Youth Forum:** Selected Youth Delegate, advising on international education and inclusive development policy.
- Queen's Commonwealth Essay Competition:** Silver Award, 2022 and 2023.

## TECHNICAL SKILLS

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**Research & Data Collection Tools:** PsychoPy, OpenSesame, Qualtrics

**Statistical Software:** JASP; SPSS (learning)

**Programming & Data Analysis:** Python (Pandas, NumPy, SciPy, Matplotlib, Seaborn), R (basic) C/C++ (basic), MySQL (basic)

**Quantitative Analysis:** ANOVA, regression, t-tests, correlation, descriptive statistics

**Qualitative Methods:** Longitudinal naturalistic observation, developmental case study writing, structured field documentation

**Languages:** English (Fluent), Hindi (Native), Punjabi (Native)

## REFEREES

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**Dr. Anuj Kumar Shukla**, Assistant Professor, Department of Cognitive Science

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