DIKSHA SHRIVASTAVA

diksharaigarh57@gmail.com · *diksha-shrivastava13.github.io*

RESEARCH INTERESTS

AI for Scientific Discovery · Continual Learning in Complex World Models · Decision-making in Language Models · Latent Space Reasoning

EDUCATION

Bennett University (The Times Group), India

2021-2025 — **BACHELOR OF TECHNOLOGY IN COMPUTER SCIENCE**

GPA: 9.04/10.00 *(ongoing)* · Specialization in Artificial Intelligence
Awarded for extraordinary performance in industry, academia and hackathons. Investigated mathematical frameworks for continual reasoning in world models. Researched failure modes of language models in discovering implicit causal structures.
THESIS | CODE

PUBLICATIONS

Continual Learning in Complex Systems

2025 · Grounding Inferred Relationships in Complex World Models with Continual Reasoning. DIKSHA SHRIVASTAVA, MANN ACHARYA, DR. TAPAS BADAL. *In progress.*

2025 · Bridging Latent Space Reasoning to External World Model Representation for Language Models with Iterative Hypothesis Cycles. DIKSHA SHRIVASTAVA, MANN ACHARYA, DR. TAPAS BADAL. *In progress.*

Reinforcement Learning

2025 · Agents are Decision-Makers First: Leveraging Graph of Decisions for Intermediate Reward Modeling. DIKSHA SHRIVASTAVA, MANN ACHARYA, DR. TAPAS BADAL. *In progress.*

2025 · Beyond Correctness: Generating New Problems from Divergent Solutions for Reasoning with Rearrangement Sampling. DIKSHA SHRIVASTAVA, MANN ACHARYA, DR. TAPAS BADAL. *In progress.*

2025 · Closing the Loop: Execution-Guided Continuous Generation for Adaptive Model Reasoning. DIKSHA SHRIVASTAVA, MANN ACHARYA, DR. TAPAS BADAL. *In progress.*

Cognitive Sciences

2022 · Analysis of Neural Correlates of Different Music Genres using Machine Learning. DIKSHA SHRIVASTAVA, DR. ANUJ BHARTI. *Accepted to Fechner Day 2022, by International Society for Psychophysics.*

APPLIED AI & PRODUCT DEVELOPMENT

Digital Product School, Munich with German Federal Ministry, BMZ

Jun–Sept, 2024 — **AI ENGINEER, FOUNDING TEAM**

Can AI reason across multi-subsystem policy decisions spanning decades?

Product: Designed and piloted an AI-driven Decision-Making System for policy officers in 60+ countries, modeling hierarchical government initiatives as a 5-level structured world model to support strategic policy decisions.

Pipeline: Developed multi-layered agentic reasoning pipelines (54+ iterations over 200–2000 entities from unstructured reports) to track causal shifts in policy evolution.

Tools: Built 7+ AI tools—situational similarity models, graph-based retrieval, and AI-driven action plans—to surface risk factors and rank interventions by structural importance.

Inference: Explored and benchmarked reasoning methods (agentic workflows, multi-hop reasoning, few-shot planning, Monte Carlo Tree Search, graphrag, etc.) to capture implicit relationships over time.

Handover: Delivered the system to BMZ's DataLab with AI-driven recommendations, strategic planning insights, and roadmaps for SLM training on structured decision-making tasks.
TECHNICAL BLOG