Research Digest — 2025-08-24 17:48 UTC

This automatically generated digest highlights trending topics and recent papers.

Trending Topics

Topic ID	Recent	Baseline	Ratio
3	26	0	27.00
7	18	0	19.00
4	15	0	16.00
5	10	0	11.00
9	10	0	11.00
1	7	0	8.00
6	6	0	7.00
8	6	0	7.00

Topic 3

Synopsis: This problem, with widespread applications in science and engineering, is proved to be NP-h

Published	Title	Authors	Category
2025-08-21	Discovering Hidden Algebraic Structures via Transformers with Rank-Aware Beam GRPO
2025-08-21	Intern-S1: A Scientific Multimodal Foundation Model	Lei Bai, Zhongrui Cai, Maosong Cao,
2025-08-21	LiveMCP-101: Stress Testing and Diagnosing MCP-enabled Agents on Challenging Queries
2025-08-21	Language-Guided Tuning: Enhancing Numeric Optimization with Textual Feedback	Yuxing
2025-08-21	Neural Robot Dynamics	Jie Xu, Eric Heiden, Iretiayo Akinola, Dieter Fox, Miles Macklin, Ya
2025-08-21	Dissecting Tool-Integrated Reasoning: An Empirical Study and Analysis	Yufeng Zhao, Jun
2025-08-21	Active Learning for Neurosymbolic Program Synthesis	Celeste Barnaby, Qiaochu Chen, R
2025-08-21	Response and Prompt Evaluation to Prevent Parasocial Relationships with Chatbots	Emm
2025-08-21	End-to-End Agentic RAG System Training for Traceable Diagnostic Reasoning	Qiaoyu Zhe
2025-08-21	Measuring the environmental impact of delivering AI at Google Scale	Cooper Elsworth, Ke

Topic 7

Synopsis: The paper highlights the discontinuity from previous research and the scarcity of accessible

Published	Title	Authors	Category
2025-08-21	Scaling Group Inference for Diverse and High-Quality Generation	Gaurav Parmar, Or Pata
2025-08-21	CineScale: Free Lunch in High-Resolution Cinematic Visual Generation	Haonan Qiu, Ning
2025-08-21	Visual Autoregressive Modeling for Instruction-Guided Image Editing	Qingyang Mao, Qi Ca
2025-08-21	Waver: Wave Your Way to Lifelike Video Generation	Yifu Zhang, Hao Yang, Yuqi Zhang, Y
2025-08-21	A 16.28 ppm/$^\circ$C Temperature Coefficient, 0.5V Low-Voltage CMOS Voltage Referen
2025-08-21	EcomMMMU: Strategic Utilization of Visuals for Robust Multimodal E-Commerce Models	X
2025-08-21	WorldWeaver: Generating Long-Horizon Video Worlds via Rich Perception	Zhiheng Liu, Xu

| 2025-08-21 | StreamMem: Query-Agnostic KV Cache Memory for Streaming Video Understanding | Yanla
| 2025-08-21 | Stemming -- The Evolution and Current State with a Focus on Bangla | Abhijit Paul, Mashiat
| 2025-08-21 | Position Bias Mitigates Position Bias:Mitigate Position Bias Through Inter-Position Knowledg

Topic 4

Synopsis: The nine model category structures on the category of sets. We compute the longitudinal an

Published	Title	Authors	Category
2025-08-21	Quantum cohomology of variations of GIT quotients and flips	Zhaoxing Gu, Song Yu, Tony
2025-08-21	Skyrmion Lattice Order Controlled by Confinement Geometry	Raphael Gruber, Jan Rothör
2025-08-21	PyKirigami: An interactive Python simulator for kirigami metamaterials	Qinghai Jiang, Gary
2025-08-21	The nine model category structures on the category of sets	Omar Antolín-Camarena, Tobi
2025-08-21	Orientation dependent anomalous Hall and spin Hall currents at the junctions of altermagne
2025-08-21	Intrinsic Incompatibility: Why Static Droplets Cannot Exist in Cahn-Hilliard-Navier-Stokes Sy
2025-08-21	Gaussian-Based Periodic Grand Canonical Density Functional Theory with Implicit Solvatio
2025-08-21	Classification of Magnetism and Altermagnetism in Quasicrystals	Zhi-Yan Shao, Chen Lu,
2025-08-21	One-loop determinants in AdS$_3$ supergravity with extended supersymmetry	Ilija Rakic,
2025-08-21	The Liouville model in the L^1 phase: coupling and extreme values	Michael Hofstetter, C

Topic 5

Synopsis: We find significant overlap among the causal variables identified by linear and non-linear me

Published	Title	Authors	Category
2025-08-21	Bayesian Hierarchical Methods for Surveillance of Cervical Dystonia Treatments	D. Baido
2025-08-21	Spatial Super-Infection and Co-Infection Dynamics in Networks	Alyssa Yu, Laura P. Schap
2025-08-21	The Approach of Sliced Inference in Systems of Stochastic Differential Equations with Com
2025-08-21	Large-dimensional Factor Analysis with Weighted PCA	Zhongyuan Lyu, Ming Yuan	stat.M
2025-08-21	Non-parametric Causal Discovery for EU Allowances Returns Through the Information Imba
2025-08-21	Conditional cross-fitting for unbiased machine-learning-assisted covariate adjustment in ran
2025-08-21	Fast approximate Bayesian inference of HIV indicators using PCA adaptive Gauss-Hermite
2025-08-21	Joint Classification of Haze and Dust Events Using Factorial Hidden Markov Model Framew
2025-08-21	Amortized In-Context Mixed Effect Transformer Models: A Zero-Shot Approach for Pharmac
2025-08-21	Through-the-Cycle PD Estimation Under Incomplete Data -- A Single Risk Factor Approach

Topic 9

Synopsis: In generative models, the most natural OOD score is the data likelihood. The accuracy of ve

Published	Title	Authors	Category
2025-08-21	Fine-grained Multi-class Nuclei Segmentation with Molecular-empowered All-in-SAM Model
2025-08-21	Probability Density from Latent Diffusion Models for Out-of-Distribution Detection	Joonas J
2025-08-21	Tutorial on the Probabilistic Unification of Estimation Theory, Machine Learning, and Genera

| 2025-08-21 | Communication Efficient LLM Pre-training with SparseLoCo | Amir Sarfi, Benjamin Thérien,
| 2025-08-21 | Hessian-based lightweight neural network for brain vessel segmentation on a minimal traini
| 2025-08-21 | Towards a 3D Transfer-based Black-box Attack via Critical Feature Guidance | Shuchao Pa
| 2025-08-21 | Weakly-Supervised Learning for Tree Instances Segmentation in Airborne Lidar Point Cloud
| 2025-08-21 | Correct-By-Construction: Certified Individual Fairness through Neural Network Training | Ru
| 2025-08-21 | Label Uncertainty for Ultrasound Segmentation | Malini Shivaram, Gautam Rajendrakumar G
| 2025-08-21 | GRASPED: Graph Anomaly Detection using Autoencoder with Spectral Encoder and Decod