

Name	Yusuke Matsui	Lab. location	Hongo Campus (Eng. Bld. #2)	Area	CV+DS+ML
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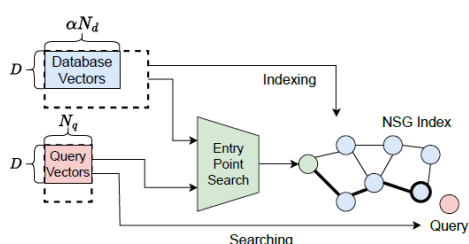
Compute Vision, Data Structure, and Machine Learning

Our team focuses on computer vision, data structures, and machine learning. We research various layers, ranging from low-level data structures and algorithms like memory-efficient large-scale search algorithms and machine learning-enhanced data structures, to high-level systems including multimodal, prompt, and LLM processing. Matsui Lab collaborates with the Yamakata and Yamasaki Lab.

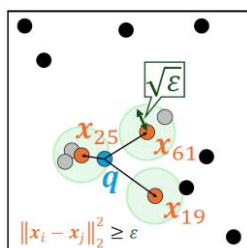
✉ matsui@hal.t.u-tokyo.ac.jp 🏠 <http://yusukematsui.me>

📄 Blog: <https://mti-lab.github.io/blog/>

Research topic



Entry point optimization for graph-based ANN methods



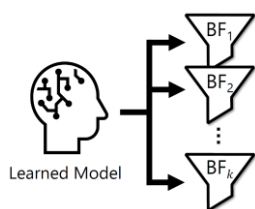
Data structure for diverse search



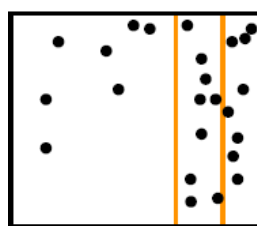
Adversarial doodle to fool an AI system



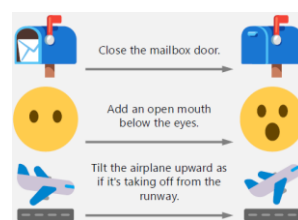
Zero-shot comic content understanding



ML + Data structure: fast construction for learned bloom filters



ML + Data structure: learned multi-index



<https://github.com/mti-lab/SVGEditBenchV2>

SVGEditBenchV2: Benchmark for LLM's SVG Editing Capabilities

Life in the lab

- Research is a process of sharing and accumulating knowledge. For this reason, we place great importance on openness in our research. We encourage students to publish their research results as a library for people to use. We welcome students who like modern software engineering.
- As the computing environment of our laboratory, we have a cloud computing environment with ABCI (a GPU cluster at AIST) and AWS. Each student is free to perform costly computations such as deep learning or distributed computing.