

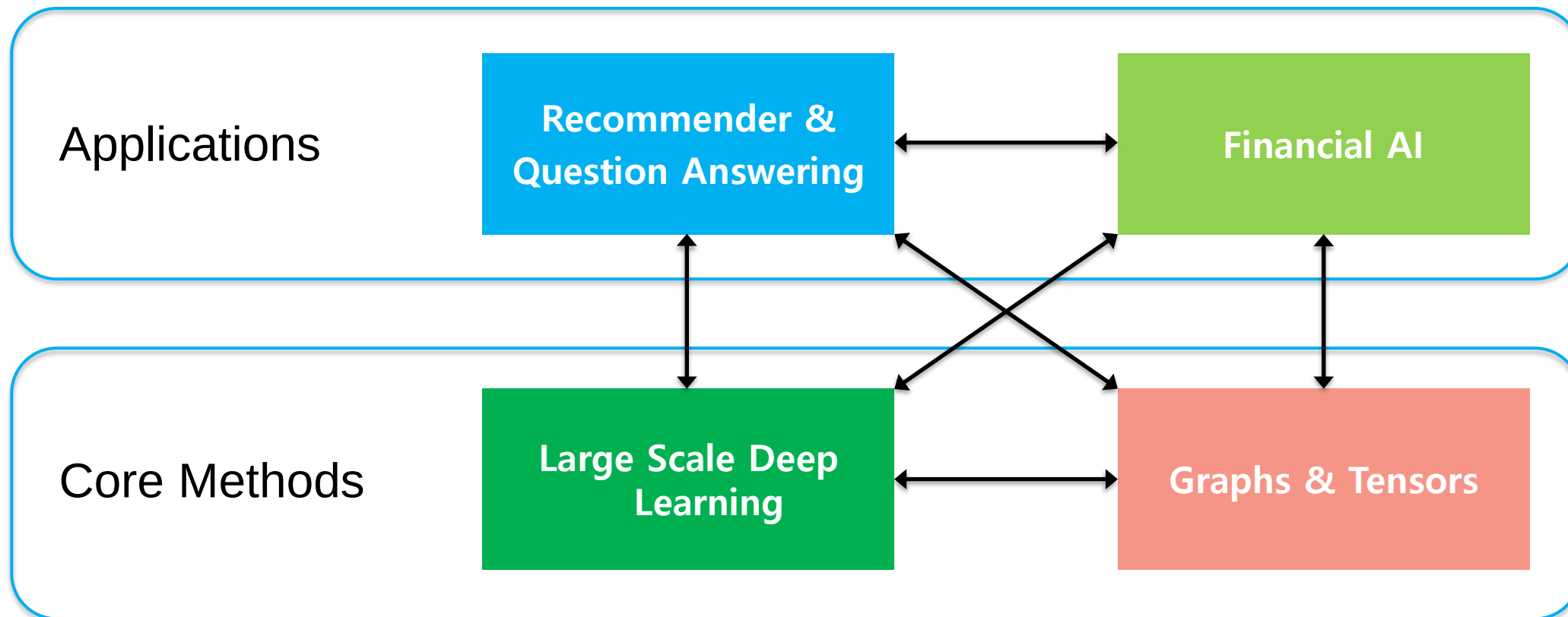
Data Mining Laboratory

<http://datalab.snu.ac.kr>

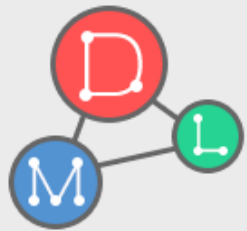


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Methods and Applications for Data Mining and Machine Learning (AI)



All topics are
tightly related



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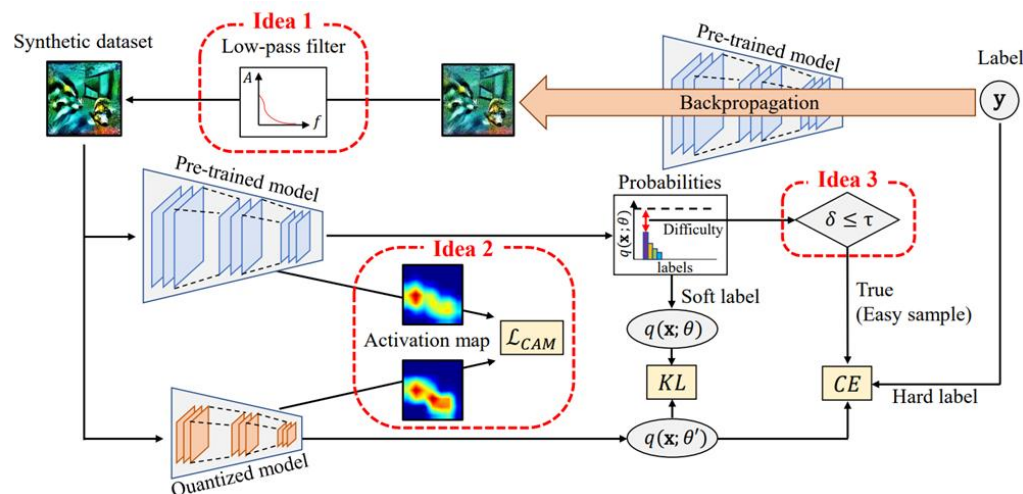
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Large Scale Deep Learning

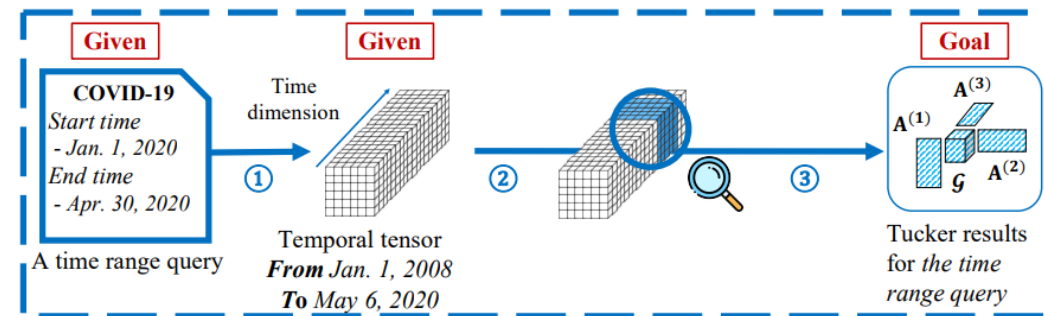
- Model compression
- LLM (large language model) compression
- On-device AI



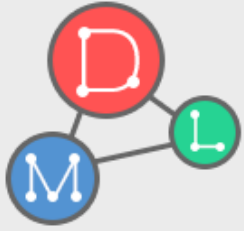
SynQ: Accurate Zero-Shot Quantization by Synthesis-aware Fine-tuning (ICLR)

Graphs and Tensors

- Graph neural network
 - Node classification and representation learning
- Graph mining
 - Knowledge graph, ranking, link prediction, and relation inference
- Scalable tensor and graph analysis



Fast and Memory-Efficient Tucker Decomposition for Answering Diverse Time Range Queries (KDD Best Research Paper)



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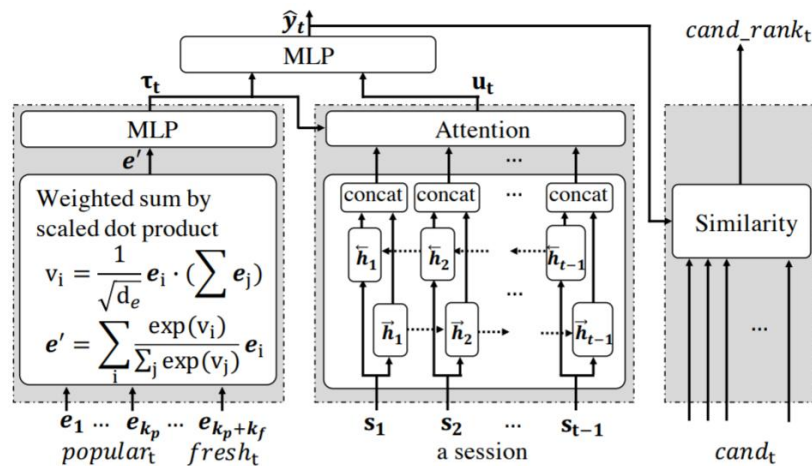
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Recommender & Question Answering

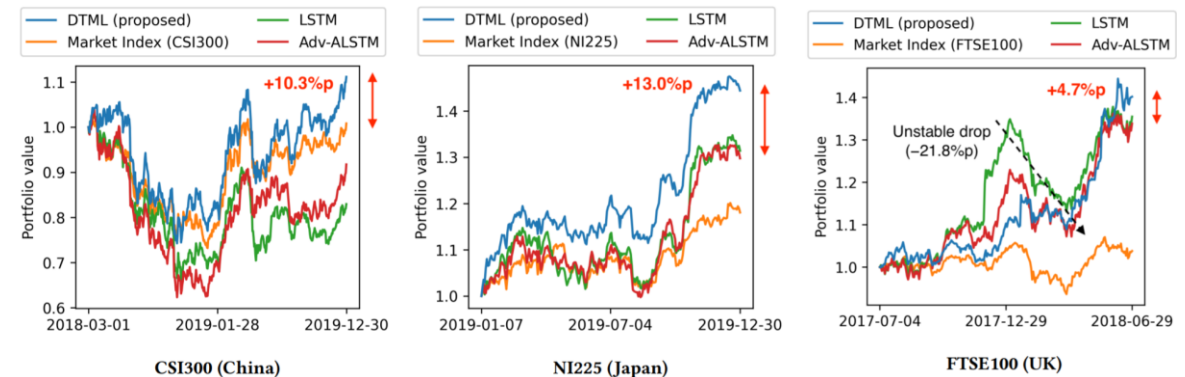
- Diversified recommendation
- Personalized QA System
- Domain-specific LLM



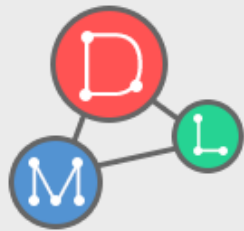
Accurate News Recommendation Coalescing Personal and Global Temporal Preferences (PAKDD **Best Student Paper**)

Financial AI

- Time series prediction
- Stock price prediction
- Portfolio management / trading strategy (with RL)



Accurate Multivariate Stock Movement Prediction via Data-Axis Transformer with Multi-Level Contexts (KDD)



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최근 연구 실적

- 데이터 마이닝, 기계 학습 분야 세계 선도
- 국제 최우수 학회 및 SCI 저널에 180편 이상 논문 출판
 - KDD, ICLR, CIKM, WWW, ICDM, ICDE, NeurIPS 등
- 국내/해외 특허 160편 이상 출원/등록
- Best Paper Awards (국내 최다 수상)
 - KDD Best Research Paper Award
 - ICDM 10-Year Best Paper Award
 - ICDE Best Research Paper Award
 - PAKDD Best Student Paper Award

수상 실적

- 우수한 연구 실적에 기반한 다양한 수상 실적
- KDD Doctoral Dissertation Award (국제 최우수 박사 졸업 논문상)
- Google Ph.D. Fellowship
- Qualcomm Innovation Fellowship
- 삼성 휴먼테크 논문 대상 (7년 연속 수상)
- 울촌 AI Star Fellowship
- Naver Ph.D. Fellowship

연구실 구성원 진로

- 졸업생 진로: 교수 (국내 대학 교수 4명), 스타트업 창업/입사, 대기업, 연구소 등

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