Lalchand Pandia

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Overview

I am a PhD student in Computer Science at the University of Chicago, specializing in NLP, LLMs, and data-centric AI, with expertise in training and fine-tuning large language models (LLMs) on multi-GPU distributed systems. I bring 5+ years of industry experience as a Systems Architect and Engineer. My work has been published in top conferences (EMNLP, CoNLL) with a focus on model robustness and pragmatics. Experienced in PyTorch, Accelerate, and distributed systems. Seeking research scientist intern or applied scientist intern roles focused on NLP, LLMs, and AI research.

Publications

Pragmatic competence of pre-trained language models through the lens of discourse connectives   *Accepted at CoNLL 2021*
Lalchand Pandia, Yan Cong, Allyson Ettinger

Sorting through the noise: Testing robustness of information processing in pre-trained language models   *Accepted at EMNLP 2021*
Lalchand Pandia, Allyson Ettinger

Education

University of Chicago
Ph.D., Computer Science   *Sept 2022 - present*
Advisor: Dr. Allyson Ettinger

Indian Institute of Technology Kanpur
M.Tech. Computer Science and Engineering (CSE)   *2015-2017*

Kalasalingam University, Krishnankoil
B.Tech.(Honours) Computer Science and Engineering (CSE)   *2008-2012*

Ongoing Projects

Data selection for LLM training
Investigating methods for data selection and learning dynamics in large-scale LLM training, focusing on efficient training using multi-GPU and distributed setups to optimize model performance and resource utilization.

Industry experience

Huawei Technologies India Pvt. Ltd
System Architect,   *Dec 2018- July 2022*

- Designed and implemented a logical replication module for Huawei FileSystem, enabling seamless replication with Amazon S3, reducing manual backup.
- Developed distributed data manager for cross-cluster NAS replication, improving I/O performance by optimizing data transfer paths and reducing latency

NetApp India Pvt. Ltd
Member of Technical Staff II,   *July 2017- July 2018*
Focused on backup of data from NetApp storage servers to backup devices such as tape using NDMP.

Tata Consultancy Services Pvt. Ltd
System Engineer,   *Dec 2012- June 2015*
Worked on Java client-server applications dealing with insurance policies.

Achievements and Awards

- Ranked in top 0.3% in Graduate Aptitude Test in Engineering(GATE), 2015, Computer Science.
- Secured 2nd rank in Computer Science and Engineering Department in Bachelor of Technology, 2012.

Skills

- **Programming Languages**: Python, C, C++, Java
- **ML & NLP Frameworks**: PyTorch, Accelerate, Transformers (Hugging Face), NumPy, Scikit-learn
- **Distributed Multi-GPU Training**: PyTorch Distributed, Accelerate, DeepSpeed, multi-GPU training and optimization