

JUNWEI DENG

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EDUCATION	University of Illinois Urbana-Champaign , United States <i>Ph.D. in Information Sciences</i> • Advisor: Prof. Jiaqi Ma	GPA: 3.94/4.00 <i>2023.9 - now</i>
	University of Michigan , United States <i>M.S. in Information</i>	GPA: 3.89/4.00 <i>2019.9 - 2021.4</i>
	Shanghai Jiao Tong University , P.R. China <i>B.S.E. in Electrical and Computer Engineering</i>	GPA: 3.71/4.00 <i>2016.9 - 2020.8</i>

RESEARCH INTERESTS	Trustworthy Machine Learning <i>Data-centric AI (e.g., data attribution) and trustworthy ML topics (e.g., robustness, fairness) on different data formats (e.g., graphs, etc.)</i>
	Responsible AI <i>Developing technical solutions for operationalizing regulatory principles (e.g., copyright issues for generative AI).</i>
	AI Toolkit Development <i>Deliver the innovation and facilitate the industrial and research communities to apply or study specific areas (e.g., data attribution, time series analysis, graph learning, LLMs, AI framework acceleration).</i>

WORK EXPERIENCE	Intel , P.R. China <i>AI Frameworks Engineer</i> <i>2021.5-2023.7</i>
	<ul style="list-style-type: none">• Led, designed, and partially implemented IPEX-LLM, bigdl-chronos, and bigdl-nano, which have collected more than 9K stars.• The toolkits cover areas of LLMs, time series analysis, and PyTorch/TensorFlow acceleration.• I made more than 20,000 open-source project contributions, over 300 pull requests' code reviews, more than 50 API designs, more than 10 promotion/tech talks, and led around 10 full-time developers and interns on the project.

SELECTED PAPERS (* stands for equal contribution, more on Google Scholar)	<ul style="list-style-type: none">• dattri: A Library for Efficient Data Attribution. NeurIPS 2024 (Datasets & Benchmark Track, Spotlight). <i>J. Deng*, T. Li*, S. Zhang, S. Liu, Y. Pan, H. Huang, X. Wang, P. Hu, X. Zhang, J. Ma.</i>• Adversarial Attack on Graph Neural Networks as An Influence Maximization Problem. WSDM 2022. <i>J. Ma*, J. Deng*, Q. Mei.</i>• Subgroup Generalization and Fairness of Graph Neural Networks. NeurIPS 2021 (Spotlight, top 3%). <i>J. Ma*, J. Deng*, Q. Mei.</i>
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PREPRINTS (* stands for equal contribution)	<ul style="list-style-type: none">• Efficient Ensembles Improve Training Data Attribution. In Submission 2024. <i>J. Deng*, T. Li*, S. Zhang, J. Ma.</i>
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- Computational Copyright: Towards A Royalty Model for Music Generative AI. **In Submission 2024.**
J. Deng, S. Zhang, J. Ma.

LAED PROJECTS

- *dattri*: is a PyTorch library for developing, benchmarking, and deploying efficient data attribution algorithms (**NeurIPS 2024 as spotlight paper**).
- *IPEX-LLM*: is a PyTorch library for running LLM on Intel CPU and GPU (e.g., local PC with iGPU, discrete GPU) with very low latency.
- *bigdl-chronos*: is an application framework for building a fast, accurate and scalable time series analysis application.
- *bigdl-nano*: is a Python package to transparently accelerate PyTorch and TensorFlow applications on Intel XPU.

TEACHING

- **Data Mining**
SIADS 532, University of Michigan, Graduate Student Instructor
- **Methods and Tools for Big Data**
VE 472, Shanghai Jiao Tong University, Teaching assistant

I hosted weekly office hours to help students understand concepts and code.

SERVICE

- **Conference Reviewer**: NeurIPS 2024, ICLR 2025, AISTATS 2025
- **Student Organizer**: Regulatable ML @ NeurIPS 2023/2024

AWARDS & SCHOLARSHIP

- **Explorer Scholarship (2020)**, for outstanding students who went aboard for their graduate study provided by Shanghai Jiao Tong University.
- **Shanghai Outstanding College Graduate (2020)**, for outstanding students graduated in Shanghai.
- **National Scholarship (2018)**, the highest award provided by Ministry of Education in P.R. China.

SKILL

- **Language**: Python, C++, Git, Markdown, Shell, L^AT_EX
- **Framework**: Pytorch, Tensorflow, CUDA, Spark
- **English**: TOEFL 107/120 (Speaking: 25)