

Li Zhang

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EDUCATION

University of Pittsburgh

Doctor of Philosophy in Intelligent Systems

Pittsburgh, U.S.A.

Aug. 2024 - Apr. 2029

- Research: AI & Law
- Advisor: Prof. [Kevin Ashley](#)
- GPA: 4.0/4.0
- Courses: Large Language Models, Natural Language Processing, Machine Learning

Tsinghua University

Master of Computational Law

Beijing, China

Sep. 2019 - Jun. 2022

- Research: Computational Law & Business Law
- Advisor: Prof. [Shangshang Liang](#)

Australian National University

Study Abroad Student in College of Engineering and Computer Science

Canberra, Australia

Jul. 2017 - Dec. 2017

- GPA: 6.5/7.0

China University of Mining and Technology

Bachelor of Electrical Engineering

Jiangsu, China

Sep. 2015 - Jun. 2019

- GPA: 90.91/100, Ranking: 2/278

PROJECTS

LLM Alignment and Applications in Legal Reasoning

Pittsburgh, U.S.A

Li Zhang, Morgan Gray, Kevin Ashely

Aug. 2024 -

- Created an innovative multi-agent framework to generate reliable legal arguments through structured collaboration and reflection mechanisms, achieving a decent accuracy rate in argument generation and significantly surpassing state-of-the-art baselines in precedent identification, analogy construction, and case distinction tasks.
- Constructed vector database, developed and deployed a multi-agent LLM framework and for legal reasoning and document retrieval, integrating NLP techniques and benchmarking performance. Led collaboration with legal experts to establish evaluation metrics and validate model outputs against expert-defined reasoning standards.

ML-Based Prediction of Academic Performance

Pittsburgh, U.S.A

Li Zhang, Morgan Gray, Jessica Macaluso, Kevin Ashely, Scott Fraundorf

Aug. 2024 -

- Developed a machine learning model that achieved a decent accuracy for law school academic performance using feature engineering and Random Forest regression, enabling early identification of at-risk students for targeted interventions.
- Conducted comprehensive feature selection and statistical analysis that revealed skill-specific predictors of academic success, providing actionable insights for legal education pedagogy and personalized learning approaches.

Automated Legal Citation Correction through ML and NLP

Beijing, China

Li Zhang

Jun. 2021 - June. 2022

- Built a DynamoDB repository for structured storage of labeled citation errors, enabling iterative model refinement. Achieved 95% precision in detecting inconsistencies through feature engineering (e.g., regex patterns, contextual embeddings) and hyperparameter optimization.
- Designed and deployed a scalable citation-correction system to train and host the NLP model. Partnered with legal researchers to validate outputs against the Bluebook standard.

AI-driven Open-source Compliance and Strategy

Beijing, China

Li Zhang, Shangshang Liang

Jan. 2020 - May. 2020

- Developed a machine learning-based risk assessment system to automate compliance checks for 20+ open-source licenses (e.g., GPL, Apache). Leveraged NLP techniques to parse license terms and flag high-risk clauses, reducing manual review time by 60% while maintaining high accuracy.
- Trained a classification model to categorize FOSS projects by compliance risk levels, using features like license type, dependencies, and jurisdiction. Collaborated with legal experts to label datasets and validate outputs.

PUBLICATIONS & TALK

- **Li Zhang** "Enhancing Legal Argument Generation: From Basic Schemes to Trustworthy Multi-Agent Systems", Talk at ISP Forum, the University of Pittsburgh, 2025
- **Li Zhang**, Morgan Gray, Kevin Ashely: "Leveraging Multi-Agent Collaboration for Trustworthy Legal Argumentation Generation", Under Review, 2025
- Morgan Gray, **Li Zhang**, Kevin Ashely: "Generating Case-Based Legal Arguments with LLMs", In Proceedings of the 4th ACM Computers and Law Symposium, 2025
- Weinan Liu, Boyuan Peng, Xiaoyu Liu, Feifan Ren, **Li Zhang***(corresponding): "Intelligent Proximate Analysis of Coal Based on Near-Infrared Spectroscopy", Journal of Applied Spectroscopy, 2021
- Meng Lei, **Li Zhang**(corresponding), Ming Li, Huiyu Chen, Xuan Zhang: "Near-infrared Spectrum of Coal Origin Identification Based on SVM Algorithm", In Proceedings of Chinese Control Conference, 2018
- Meng Lei, Ning Bian, Ming Li, Lianshuai Sha, Haowen Fu, **Li Zhang** "A kind of water area refuse automated cleaning ship and automatic cleaning method based on machine vision", Patent Publication No. CN106741683A, 2017

SKILLS

- **Programming:** Python (Pandas, NumPy, PyTorch, TensorFlow and Scikit-learn), SQL, JavaScript
- **Cloud Technologies:** SageMaker, DynamoDB and API Gateway
- **Others:** L^AT_EX, Markdown, Linux, Shell and Anaconda

SELECTED AWARDS & HONORS

- SCI Fellowship, University of Pittsburgh, 2024
- Dean's List (top 1%), Tsinghua Law School, 2022
- Law School Fellowship, Tsinghua Law School, 2021
- Dean's List (top 1%), China University of Mining and Technology, 2019
- Study Abroad Scholarship (1 out of 180), China University of Mining and Technology, 2017