

Zhe (Zoe) WANG

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EDUCATIONS

Simon Fraser University <i>PhD, Computer Science Supervisor: Dr. Linyi Li</i>	Sep 2025 - Aug 2029 <i>Vancouver, Canada</i>
Simon Fraser University <i>MSc, Computer Science</i>	Sep 2022 - May 2024 <i>Vancouver, Canada</i>
The Chinese University of Hong Kong, Shenzhen <i>BSc, Mathematics</i>	Sep 2018 - Jul 2022 <i>Shenzhen, China</i>

EXPERIENCE

Simon Fraser University <i>Research Assistant at TAI Lab</i>	Sep 2025 – Present <i>Vancouver, Canada</i>
<ul style="list-style-type: none">Constructed synthetic context-free grammar datasets at controlled depths (2–6) to benchmark model reasoning complexity.Tuned and fine-tuned large language models across depths to study generalization, scaling limits, and depth-sensitive performance.	
SAP <i>Data Scientist Intern (R&D)</i>	Sep 2024 - Sep 2025 <i>Vancouver, Canada</i>
<ul style="list-style-type: none">Post-trained (SFT, DPO, GRPO, LoRA) 8B-parameter language models on open-source software licenses for the license-permission classification task.Deployed a Retrieval-Augmented Generation (RAG) system using LangGraph, ensuring compatibility with SAP AI Core.Enhanced LLM stability and consistency by transitioning from JSON mode to function calling with Pydantic, improving structured output reliability.Experimented with 20+ prompt versions and 5+ Large Language Models, auto-logged evaluation results using MLFlow.Served quantized models with Ollama on GPU (GCP) for scale and CPU for lightweight demos, cutting costs while preserving accuracy.	
Hanglok-Tech <i>Machine Learning Researcher Intern</i>	Jul 2023 - Sep 2023 <i>Shenzhen, China</i>
<ul style="list-style-type: none">Used a reinforcement learning method (DDPG) from Stable Baseline3 to enhance a robotic arm's performance in Panda-gym, achieving higher cumulative rewards.Leveraged generative adversarial imitation learning (GAIL) to teach humanoid robots complex motions in real-time in Isaac Gym.	

PUBLICATIONS

Zhe Wang, Mohamad A. Tayebi, “AutoRed: Automated Attack Scenario Generation Framework for Red Teaming of LLMs.” *IEEE International Conference on Big Data (BigData), Industry and Governance Track*, 2024.

PROJECTS

<i>AutoRed: Automated Attack Scenario Generation for Red Teaming of LLMs Code Paper</i>	
<ul style="list-style-type: none">Fine-tuned T5 model and applied a reinforcement learning-based approach for language generation to generate diverse adversarial prompts.Developed an automated red teaming (testing) pipeline against 100 defense strategies and 5 large language models (Gemma, GPT-3.5, Llama-3-8b, Mistral-7b, InternLM), achieving 80% attack success rate.First authored a short paper accepted at IEEE BigData 2024, Industry and Governance track.	

TECHNICAL SKILLS

Languages	Python, C/C++ (CUDA), SQL, Unix & scripting, JavaScript
Data Wrangling	NumPy, Pandas, SciPy, PySpark, Matplotlib, Seaborn, Altair
Machine Learning	PyTorch, TensorFlow, Keras, Scikit-learn, spaCy, NLTK, OpenCV, Transformers
MLOps & LLMops	MLFlow, Wandb, AWS Bedrock, Vertex AI, vLLM, Unsloth
Agentic Framework	AutoGen, LangChain, LlamaIndex, Pydantic AI, CrewAI, Instructor
Cloud & DevOps	GCP (AWS, Azure), Docker (Kubernetes), Git, Asana (Jira)