

Minji Lee

lee3450@purdue.edu@purdue.edu • 765-337-7147 • <https://www.linkedin.com/in/minji-lee-purdue>

Education

PURDUE UNIVERSITY

Ph.D. Candidate, Technology

Master of Science, Computer and Information Technology

SEJONG UNIVERSITY

Bachelor of Fine Arts and Bachelor of College of Software Convergence

West Lafayette, IN

May 2021 – Aug 2024

Aug 2019 – May 2021

Seoul, South Korea

Mar 2012 – Feb 2017

Experience

Purdue University

West Lafayette, IN

Research Assistant in M2M Lab

Mar 2024 – Present

- Developing a DiT model combined with Patch n' Pack to create high-resolution images of people, trained on a vast dataset comprising real-world images containing individuals, primarily sourced from the COCO dataset.
- Designing and conducting experiments and simulations to test hypotheses and validate model predictions.

LG Innotek

Seoul, South Korea

Inno MLOps Research Aide in AI/BigData Solution Team

Jul 2023 – Aug 2023

- Designed and revised the MLOps platform (InnoMLOps) for manufacturing model utilization, enhancing the production of core components for mobile devices, automotive displays, semiconductors, and smart products.
- Developed an autonomous machine learning pipeline system as well as an AI model re-learning algorithm, resulting in a 2.1% improvement in model deployment efficiency.
- Generated +1,200 synthetic datasets using a diffusion model noise, enhancing data quality and quantity for training.
- Conducted research to compare and evaluate MLOps platforms such as AWS SageMaker, MLFlow, TFX, and Kubeflow, considering both business processes and performance metrics.

Argonne National Laboratory

Lemont, IL

Research Aide in Mathematics and Computer Science Lab

May 2022 – Aug 2022

- Aimed to create an Ansible script for the NVidia Nano node platform for students and scientists to develop edge-to-cloud software pipelines, fostering collaboration and innovation in data analysis and research.
- Utilized to explore the capabilities of machine learning and deep learning for intelligent sensor designs, facilitating experimentation and advancement in Sage Project.

Argonne National Laboratory

Lemont, IL (Virtual)

Research Aide in Mathematics and Computer Science Lab

May 2021 – Aug 2021

- Implemented integration of Node-RED into the IBM cloud computing platform and web portal inside of Docker managed by Kubernetes.
- Analyzed geographical and meteorological data from local conditions and events, facilitating real-time data collection in diverse environments wildfires, heatwaves, and storms.

Skills & Interests

Mathematics: Proficient in algebra, calculus, and statistics, with the ability to analyze and interpret complex mathematical models and familiarity with mathematical optimization techniques and probability theory.

Python3: Proficient in Python programming language, with experience in developing applications, scripts, and data analysis tools using libraries such as NumPy, Pandas, and Matplotlib.

PyTorch: Proficient in deep learning, adept at debugging dependency issues to ensure seamless implementation across diverse OS, with experience in building and training neural networks for computer vision.

Docker: Proficient in Docker containerization, capable of packaging applications and their dependencies into lightweight, portable containers for easy deployment and management.

Language proficiency

- Fluent: English, Korean, and Japanese
- Moderate: Chinese