# FANGPING LAN

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## Education

- **Temple University**

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| **School:** PhD of Computer Science & Information | **GPA:** - |
| **Major:** Computer Science & Information | **Expected Graduate:** Summer 2027 |

- **Monmouth University**

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| **Degree:** Master of Software Engineering | **GPA:** 4.00 |
| **Major:** Software Engineering | **Graduate:** December 2020 |

- **Changshu Institute of Technology**

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| **Degree:** Bachelor of Computer Science and Technology | **GPA:** 3.79 |
| **Major:** Computer Science and Technology | **Graduate:** June 2019 |

## Research Interests

Natural Language Processing (NLP), Large Language Models (LLMs), Database Tuning, Prompt Engineer, Machine Learning (ML)

## Publications

**Google Scholar**: https://scholar.google.com/citations?hl=en&user=K00gXYUAAAAJ

- **Fangping Lan**, Abdullah Aljebreen and Eduard C. Dragut, "One Document, Many Revisions, Too Many Edit Intention Taxonomies", 2024, (Under Review)
- A. Wang, M. Anwar, **F. Lan** and M. Caesar, "Structural Semantics Management: an Application of the Chase in Networking," *2023 31st International Symposium on Modeling, Analysis, and Simulation of Computer and Telecommunication Systems (MASCOTS 2023)*
- Mubashir Anwar, Anduo Wang, **Fangping Lan**, and Matthew Caesar. 2023. Demo: Structural Network Minimization: A Case of Reflective Networking. In Proceedings of the ACM SIGCOMM 2023 Conference (ACM SIGCOMM '23)
- Mubashir Anwar, **Fangping Lan**, Anduo Wang, and Matthew Caesar. 2023. "Indirect Network Troubleshooting with The Chase". In Proceedings of the 7th Asia-Pacific Workshop on Networking (APNet '23)
- **F. Lan**, S. Biswas, B. Gui, J. Wu and A. Wang, "Design and Implementation of a Strong Representation System for Network Policies," *2022 International Conference on Computer Communications and Networks (ICCCN 2022)*
- **Fangping Lan**, Bin Gui, and Anduo Wang. 2021. "Fauré: A Partial Approach to Network Analysis". In Proceedings of the 20th ACM Workshop on Hot Topics in Networks (HotNets '21)
- Bin Gui, **Fangping Lan**, and Anduo Wang. 2021. Sarasate: a strong representation system for networking policies. In Proceedings of the SIGCOMM '21 Poster and Demo Sessions (SIGCOMM '21)
- Bin Gui, **Fangping Lan**, and Anduo Wang. 2022. Flexible Routing with Policy Exchange. In Proceedings of the 5th Asia-Pacific Workshop on Networking (APNet '21)
- W. Zhang, J. Wang and **F. Lan**, "Dynamic Hand Gesture Recognition Based on Short-Term Sampling Neural Networks", IEEE/CAA Journal of Automatica Sinica 2020

## Project experience

- **LLM is A Database Tuning Expert**                                        Sept. 2024 – now

**Project description:** Our hypothesis is that LLMs have good capability to tune database since they studied DB tuning expert's experience stored in text, e.g., manuals, blogs, forums, and LLMs can be an agent to interact with DB to optimize configurations. Thus, LLM is a database tuning expert.

**Skills:** Python, GPT-4, Llama2, PostgreSQL, MySQL, Benchbase

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- **One Document, Many Revisions, Too Many Edit Intention Taxonomies**      Sept. 2023 – now

**Project description**: We studied existing work to explore the intention behind the edits from the original and revised text. We integrated all proposed edit intention taxonomies into a comprehensive edit intention taxonomy that spans multiple application domains and analytical aspects.

- **Pyotr: Tableau as a network representation for deep analysis**      Jan. 2021 – July 2023

**Skills:** Python, SQL, PostgreSQL, Tableau, Homomorphism

- **Fauré: A partial approach to network analysis**      Sept. 2021 – Dec. 2021

**Project description:** Fauré, a preliminary design in which a datalog extension (called fauré-log) for incomplete information is developed to enable loss-less modeling, and combined with static analysis of pure datalog to implement example relative-complete verifiers.

**Skills:** Python, SQL, PostgreSQL, fauré-log

- **Sarasate: A strong representation system for network policies**      June 2021 – September 2021

**Project description:** we adopt conditional tables and the usual SQL interface (a relational structured developed for incomplete database) as a means to represent and query sets of network states in exactly the same way as a single definite network snapshot.

**Skills:** Python, SQL, PostgreSQL, conditional tables

**Demo:** https://www.youtube.com/watch?v=w9nH2et3zdI (short version), https://drive.google.com/file/d/1KcZKSrbqUhAxqfU4tFIE9Vd2WlOt87LW/view (long version)

**Website:** http://ravel-net.org/

- **Hand Gesture Recognition**      September 2019 – Dec. 2020

**Project description:** It recognizes the dynamic hand gesture base on a webcam. The hand gesture types include swiping left, swiping right, swiping down, swiping up, pushing hand away, pushing hand in, turning hand clockwise, turn hand counterclockwise, thumb up, thumb down, shaking hand, drumming fingers, stop sign and so on.

**Skills:** Python, PyTorch, OpenCV, PIL, CUDA, 3D Convolutional Neural Network, Flask, HTML/CSS, JavaScript/jQuery

**Training dataset:** 20BN-jester Dataset V1

**Project demo video:** https://youtu.be/gBE7cOssUbI, https://youtu.be/bSkLH-Ng0D8

- **Photovoltaic power generation prediction based on LSTM**      October 2018 – May 2019

**Project description:** Predicting the short-term or ultra-short-term photovoltaic power based on LSTM. This project has been applied into DAQUAN Research Institute.

**Skills:** Python, HTML, JS, Flask, LSTM, RNN

**Training dataset:** the dataset of one-year history photovoltaic power and weather condition provided from DAQUAN Research Institute.

## Work experience

- Research & Teaching Assistant      Sep. 2021 – now

**Company:** Temple University

- Research & Teaching Assistant      Sep. 2019 – Dec. 2020

**Company:** Monmouth University