# FANGPING LAN

Affiliation: Temple University, PA; Email: fangping.lan@temple.edu;
LinkedIn: https://www.linkedin.com/in/fangping-lan-608433196/

## Education

- PhD of Computer Science & Information

**School:** Temple University **GPA:** -
**Major:** Computer Science & Information **Expected Graduate:** May 2026

- Master of Software Engineering

**School:** Monmouth University **GPA:**4.00
**Major:** Software Engineering **Graduate:** December 2020

- Bachelor of Computer Science and Technology

**School:** Changshu Institute of Technology **GPA:**3.79
**Major:** Computer Science and Technology **Graduate:** June 2019

## Publications

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

- **F. Lan**, Q. Zhang and E.C. Dragut, "Making Revisions Understandable: A Survey of Edit Intentions, Methods, and Applications", (ACL'26, Under Review)
- Q. Zhang, **F.Lan**, C. Caragea, L. J. Latecki, Eduard Dragut "Scaling Performance and Low-Resource Annotation with Many-Shot In-Context Learning for Named Entity Recognition", (ACL'26, Under Review)
- **F. Lan**, A. Aljebreen and E. C. Dragut, "Why They Link: An Intent Taxonomy for Including Hyperlinks in Social Posts", (WebSci'26, Under Review)
- **F. Lan**, A. Aljebreen and E. Dragut, "One Document, Many Revisions, Too Many Edit Intention Taxonomies", July 27 2025, ACL'25 Findings
- A. Wang, M. Anwar, **F. Lan** and M. Caesar, "Structural Semantics Management: an Application of the Chase in Networking", October 16-18, MASCOTS 2023
- M. Anwar, A. Wang, **F. Lan** and M. Caesar, "Demo: Structural Network Minimization: A Case of Reflective Networking", September 10-14, Sigcomm 2023
- M. Anwar, **F. Lan**, A. Wang and M. Caesar, "Indirect Network Troubleshooting with The Chase", June 29-30, APnet 2023
- **F. Lan**, S. Biswas, B. Gui, J. Wu and A. Wang, "Design and Implementation of a Strong Representation System for Network Policies", July 2022, ICCCN 2022
- **F. Lan**, B. Gui and A. Wang, "Fauré: A Partial Approach to Network Analysis", HotNet 2021
- B. Gui, **F. Lan**, and A. Wang, August 2021, "Sarasate: A Strong Representation System for Networking Policies", November 2021, Sigcomm 2021
- B. Gui, **F. Lan**, and A. Wang, "Flexible Routing with Policy Exchange", June 2021, APNet 2021
- 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
- **F. Lan**, "The Study of the Algorithm for the Prediction of Photovoltaic Power Based on LSTM and System Development" (Undergraduate Thesis - Chinese)
- **F. Lan**, W. Zhang, X Ying, "An Indoor Positioning System Based on ZigBee and RSSI Ranging Algorithm", Software Guide, 2018, 17(2): 110-113. (Chinese)

## Project experience

- **Constraint-Aware Database Tuning** Sept. 2025 – now

**Project description:** Developed a database tuning approach that incorporates explicit knob dependency and constraint rules into Bayesian Optimization–based tuning, reducing reliance on pure trial-and-error. By leveraging documented system knowledge, the method avoids invalid or suboptimal configurations and accelerates convergence to high-performance settings.
**Skills:** Python, GPT-5, Information Retrieval(IR), Bayesian Optimization, Parameters Tuning, PostgreSQL, Benchbase

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- **Many-Shot In-Context Learning for Named Entity Recognition** Sept. 2025 – now

**Project description:** Investigated many-shot in-context learning for Named Entity Recognition, showing that scaling to hundreds of demonstrations enables LLMs to match or surpass fully supervised BERT models. Further demonstrated that many-shot ICL can serve as an effective data annotation framework, generating high-quality labels that yield significant F1 improvements for low-resource NER when used to fine-tune BERT.
**Skills:** Fine-tune BERT, LLM, NER, Many-Short In-Context Learning(ICL)

- **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

- **One Document, Many Revisions, Too Many Edit Intention Taxonomies** Sept. 2023 – Dec. 2024

**Project1 - Edit Intention Taxonomies Construction**: 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.
**Website**: https://sites.google.com/view/dmlab-unit/home
**GitHub**: https://github.com/lanfangping/UniT-EditIntentionTaxonomy

**Project 2 – A Survey of Edit Intentions, Methods, and Applications**: Conducted the first survey of text revision research from an edit-intention perspective, unifying datasets, taxonomies, identification methods, and applications. Synthesized the end-to-end revision workflow and highlighted key applications and open research challenges in NLP.

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

**Technique:** Python, SQL, PostgreSQL

- **Fauré: A partial approach to network analysis** September 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.
**Technique:** Python, SQL, PostgreSQL

- **Sarasate: A strong representation system for network policies** June 2021 – Sept. 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.
**Technique:** Python, SQL, PostgreSQL

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

**Project description:** It could recognize 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.
**Technique:** 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

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- **TimeMe—Time management tool** Sept. 2019 – May 2020

**Project description:** A web application is developed to aid users with difficulty to manage their time.
**Language:** PHP, MySQL, JS
**Software Framework:** Laravel, vue.js

- **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.
**Language:** Python, HTML, JS
**Software Framework:** Flask
**Algorithm:** LSTM-RNN
**Training dataset:** the dataset of one-year history photovoltaic power and weather condition provided from DAQUAN Research Institute.

## Work experience

- **Applied Scientist Intern** June 2025 – Sept. 2025

**Company:** Amazon Web Services, Arlington, VA
**Project Description:** This internship project addresses critical challenges faced by incident responders investigating potential security incidents. Specifically, it targets three key pain points: manual and repetitive search processes across multiple log sources, inefficient search strategies when confronting complex and novel security patterns, and the overwhelming challenge of analyzing large data volumes during time-sensitive investigations. This project will developing an agentic search system that can (1) automate repetitive search tasks across multiple log sources; (2) process natural language queries from security analysts; (3) provide consistent, evidence-based findings.
**Skills:** LLM, LLM agent, Bedrock API, Strands SDK, DuckDB, Python

- **Research & Teaching Assistant** Sep. 2021 – now

**Company:** Temple University

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

**Company:** Monmouth University

## Teaching experience

- **Recitation**: CIS 2166 - Math Concepts in Computing II
  Spring 2024, Computer & Information Science Department, Temple University
- CIS 3211 Automata, Computability & Languages
  Spring 2024, Computer & Information Science Department, Temple University
- **Recitation**: CIS 1966 - Honors Math Concepts in CS I
  Fall 2023, Computer & Information Science Department, Temple University
- **Lab Instructor**: CIS 1057 - Computer Programming in C
  Fall 2023, Computer & Information Science Department, Temple University
- **Guest Lecture**: Software-defined Network with Ravel
  Feb 27th, Spring 2023, CIS4319 Computer Networks and Communications, Temple University

## Algorithm competition experience

- Student Research Competition, Sigcomm 2021, August 23-27, 2021 Certificate of Recognition
- The 9th contest of LAN QIAO CUP, the Second Prize Certification No.050902401

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## Honors

- National scholarship 2016 Fall-2017 Spring
- National scholarship for Encouragement 2017 Fall-2018 Spring

## Scholarships

- The First Prize Scholarship 2015 Fall-2016 Spring CIT
- The First Prize Scholarship 2016 Fall-2017 Spring CIT
- The Second Prize Scholarship 2017 Fall-2018 Spring CIT
- The Second Prize Scholarship 2018 Fall-2019 Spring CIT
- Scholarship and he graduate research assistantship 2019 Fall MU
- Scholarship 2020 Spring MU
- The graduate research assistantship 2020 Spring MU
- The graduate teacher assistantship 2020 Spring MU