Gaoxuan Li (Gashon)

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EDUCATION

Monash University QS Top100 — Feb 2024 - Sep 2025
Master of Data Science — Bandar Sunway, Malaysia

- GPA: **4.0/4.0** (Weighted Average Mark: **84.5/100**) (So far)
- Major Courses: Statistical Data Modelling(83 HD), Foundations of Data Science(89 HD), Data Exploration and Visualisation(82 HD) and IT Research Methods(84 HD)

Hebei University of Science and Technology — Sep 2016 - Jun 2020
Bachelor of Network Engineering in Polytechnic College — Shi Jiazhuang, China

- Weighted Average Mark: 80/100
- Honors/Awards: Four-Time Recipient of Provincial-Level Awards, Seven-Time Recipient of School-Level Awards, Outstanding Undergraduate Thesis and Two-time Outstanding Team Leader

RESEARCH EXPERIENCE

Exploring GCN, GAT, and GIN Fusion for Illicit Transaction Classification in Cryptocurrency Networks — Jul 2024 - Oct 2024

- First Author (Accepted by **ICIT 2024**)
- Achievements:
  - Developed four fusion architectures—Triple Parallel Layer, Hierarchical Staging, Attention-Weighted Residual Fusion, and Multi-View Feature Aggregation—to combine GCN, GAT, and GIN for detecting illicit transactions in cryptocurrency networks.
  - Achieved a classification accuracy of up to 97.17% on the Elliptic Bitcoin dataset, surpassing single GCN, GAT, and GIN models and showing a 1.1%–2.9% improvement in accuracy for complex transaction patterns.
- Responsibilities:
  - Researched and implemented fusion techniques to enhance GNN performance for non-Euclidean data in cryptocurrency networks.
  - Designed and conducted experiments on the Elliptic Bitcoin dataset, demonstrating superior performance of proposed architectures over standalone models.
  - Quantitatively and qualitatively analyzed each fusion architecture's adaptability to illicit transaction identification, underscoring their potential in decentralized financial systems.

Adaptive MIC-Based Noise Injection in Federated Learning for Privacy-Preserving Surgical Activity Analysis — Mar 2024 - Aug 2024

- First Author (Received and Under Review by IEEE ICASSP 2025)
- Achievements:
  - Developed the FedMIC framework, enhancing model parameter security in federated learning through adaptive noise injection.
  - Introduced dynamic noise adjustment based on Maximal Information Coefficient, maintaining high accuracy while protecting privacy.
- Responsibilities:
  - Researched and optimized the relationship between noise and model parameters.
  - Designed and implemented the FedMIC framework.
  - Conducted comparative tests, showing improved security and accuracy.

- Ensured data security during federated training using adaptive noise mechanisms.

FedBChain: A Blockchain-enabled Federated Learning Framework for Improving DeepConvLSTM with Comparative Strategy Insights Nov 2023 - Apr 2024

- First Author (Accepted by IEEE SMC 2024)
- Achievements:
  - Achieved significant improvements in Precision, Recall, and F1-score (4%+ on average) across three real-world datasets.
  - Demonstrated enhancements using five federated learning strategies: FedAvg, FedProx, FedTrimmedAvg, Krum, and FedAvgM.
- Responsibilities:
  - Conducted extensive research on reducing LSTM layers for enhanced prediction performance.
  - Designed and implemented the FedBChain framework.
  - Performed comparative tests with different hidden layer units (128, 256, 512) and federated learning strategies.
  - Analyzed and validated results, ensuring improvements in performance metrics.
  - Ensured data security and privacy during distributed training processes.

Intelligent Navigation System Based on ResNet50-LSTM Combined Model Jan 2020 - Jun 2020

- Bachelor's Thesis Project (**94/100**)
- On-site Testing Video
- System Composition: The system consists of four parts: visually impaired user terminal, supervisor terminal, data cloud storage, and image cloud processing.
- Visually Impaired User Terminal: Uses Raspberry Pi 3B+ as the central processor, running a Linux system, equipped with modules for image collection, GPS positioning, ultrasonic distance measurement, voice broadcasting, and remote voice assistance.
- Supervisor Terminal: A WeChat mini-program displaying data including images and corresponding text descriptions, along with distance data of obstacles, also offering remote voice assistance.
- Data Cloud Storage: Uses China Mobile OneNET platform for storing and forwarding system data.
- Image Cloud Processing: Utilizes Flask framework-based web server to generate text descriptions via neural network models, which are then sent back to the user terminal.

WORKING EXPERIENCE

Youxuan Department, Meituan (Fortune Top 500) Jun 2021 - Sep 2021

Test Development Engineer (Part-time) Beijing, China

- Managed testing and maintenance of the logistics module for Meituan Youxuan.
- Developed and maintained automated test cases for the logistics module.
- Participated in the research and development of algorithms for automatic generation of system-level test cases.
- Conducted performance evaluations and debugging to ensure optimal system operation.
- Collaborated with various teams to improve automation processes and system efficiency.
- Received an internship performance rating of A (S/A/B/C).

Youxuan Department, Meituan (Fortune Top 500) Jul 2022 - Dec 2022

Test Development Engineer (Full-time) Beijing, China

- Responsible for testing and maintaining the vegetable market module.
- Developed and implemented automated testing frameworks to ensure the quality and functionality of the vegetable market module.
- Conducted regular performance evaluations and troubleshooting to identify and resolve issues promptly.
- Collaborated with cross-functional teams to enhance system efficiency and user experience.

- Provided documentation and training to team members on automation tools and processes.

MISCELLANEOUS

- **Skills:** Python(Working Language), Java(Working Language), SQL, Tableau, R(Moderate), Linux
- **Languages:** Chinese (Native), English (Fluent)
- **Interests:** Ping Pong & Run 13 kilometers per week & 150 Push-Ups every two days