

JIAWEI LYU

+86-18652960309 | jwlyu@qq.com | <https://lyujw.github.io/>

 [LinkedIn](#) |  [Github](#) |  [ORCID](#) |  [Google Scholar](#)

Xuzhou City, Jiangsu Province, P.R. China

SUMMARY

I am currently an IT Analyst Applications at Caterpillar Inc., where I develop automated solutions for procurement processes. I hold a Master of Computer Science from The University of Queensland and undergraduate degrees from Queensland University of Technology and Jinling Institute of Technology. In my past work and studies, my primary research interests included cybersecurity and privacy, machine learning, data mining, and related fields. I also have extensive experience in full-stack web development and artificial intelligence.

EDUCATION

- **Master of Computer Science** Feb. 2023 - Jul 2024
The University of Queensland | GPA: 6.75/7 Brisbane, Australia
- **Bachelor of Information Technology** Nov. 2021 - Dec. 2022
Queensland University of Technology | GPA: 6.5/7 Brisbane, Australia
- **Bachelor of Engineering (Software Engineering)** Sep. 2018 - Jun. 2022
Jinling Institute of Technology | GPA: 88/100 Nanjing, China

EXPERIENCE

- **Caterpillar (Xuzhou) Ltd.** Dec. 2024 - Present
IT Analyst Applications Xuzhou, China
 - Developed, modified, and maintained software applications across Web, desktop, and Microsoft Power Platform, ensuring high performance and reliability.
 - Collected and analyzed customer's requirements to optimize workflows through automation and intelligent solutions.
 - Conducted rigorous testing, including unit, integration, and system-level tests, to ensure application quality and efficiency.
 - Explored automation solutions using cutting-edge machine learning and deep learning techniques.
- **UQ Chinese Students and Scholars Association (UQCSSA)** Feb. 2023 - Oct. 2023
Web Development Team Lead (Volunteer) Brisbane, Australia
 - Led a team of web developers to design, develop, and maintain the official website, ensuring timely delivery and high quality.
 - Selected appropriate technologies and designed the website architecture to meet organizational needs and scalability requirements.
 - Managed the full deployment process, including domain registration, hosting setup, and ongoing website maintenance.
 - Coordinated team tasks, reviewed code, and provided technical guidance to ensure efficient development workflows.
 - Implemented website features and improvements based on user feedback and organizational requirements.
- **Fresco Supermarkets** Sep. 2022 - Feb. 2024
Retail Clerk (Part-time) Brisbane, Australia
 - Managed inventory levels through regular stock checks and rotation of goods.
 - Adjusted retail prices based on latest supplier costs, updated POS system records.
 - Maintain relationships with customers and suppliers, and coordinate suppliers' delivery schedules.
 - Generated regular inventory and sales reports to monitor stock levels, identify trends, and support data-driven decision making.

PROJECTS

- **Website Cookie Analysis and Privacy Policy Compliance Assessment**

Jul. 2023 - Jun. 2024

Tools: Python, Selenium, mitmproxy, Random Forest, XGBoost, Naive Bayes, GPT-4-turbo, LLaMA-3

- Developed an automated cookie collection system to capture both 1st party and 3rd party cookies.
 - Implemented a multi-stage value decoding and segmentation engine, achieving the recovery of over 118k meaningful cookie segments for semantic inference.
 - Created a fine-tuned LLM classifier and a segments-aware classification pipeline.
 - Applied statistical and ML methods to analyze cookie semantics and compliance.
 - Published the work as a peer-reviewed paper at WWW 2025 (The ACM Web Conference).
- **E-commerce Platform: 21 Day Lead Yourself Challenge**

Feb. 2022 - Nov. 2022

Tools: React.js, Firebase, Stripe, Cloudflare, Github, Jira

- Developed a full-stack e-commerce platform for the educational service.
 - Implemented Stripe Checkout API for secure payment processing.
 - Created a drip-content video streaming system using Cloudflare Stream with signed URL tokens.
 - Applied Agile methodology (Scrum) to manage project development achieving timely delivery of all client-required features.
- **Deep Residual Neural Network Based Singing Voice Detection System**

Feb. 2020 - Jun. 2021

Tools: Python, PyTorch, Homura, ResNet, SENet, RWC Dataset, Jamendo Dataset

- Developed an efficient singing voice detection algorithm for automatically recognizing and extracting the human voice component from musical signals.
 - Implemented multi-depth ResNet architectures to explore the impact of depth on detection performance.
 - Applied weighted cross-entropy loss functions to handle class imbalance between different segments.
 - Published two papers in two journals under the supervision of my academic supervisor.

PATENTS AND PUBLICATIONS

C=CONFERENCE, J=JOURNAL, P=PATENT, S=IN SUBMISSION, T=THESIS

[C.1]

Baiqi Chen, **Jiawei Lyu**, Tingmin Wu, Mohan Baruwal Chhetri, Guangdong Bai. (2025). **Semantics-Aware Cookie Purpose Compliance**. In *Proceedings of the ACM on Web Conference 2025 (WWW '25)*, pp. 1602-1613. DOI: 10.1145/3696410.3714746

[J.1]

Wenming Gui, **Jiawei Lyu**, Yinghong Liang, Zhiqiang Ao. (2021). **Singing Voice Detection Algorithm Based on a Squeeze-and-Excitation Residual Network**. *Journal of Fudan University (Natural Science)*, Vol. 60, Issue 03, pp. 360-366. DOI: 10.15943/j.cnki.fdx-b-jns.2021.03.015

[J.2]

Wenming Gui, **Jiawei Lyu**, Zhiqiang Ao. (2021). **A Singing Voice Detection Algorithm Based on Deep Residual Convolutional Neural Network**. *Journal of Jinling Institute of Technology*, Vol. 37, Issue 01, pp. 19-23. DOI: 10.16515/j.cnki.32-1722/n.2021.01.004

SKILLS

- **Programming Languages:** C/C++, C#, Java, Python, JavaScript
- **Web Technologies:** HTML/CSS/JavaScript, React.js, Node.js, REST, ASP.NET Core
- **Database Systems:** MySQL, Microsoft SQL Server, PostgreSQL, MongoDB
- **Data Science & Machine Learning:** PyTorch, NumPy, Pandas, Matplotlib, Scikit-learn, Jupyter Notebook
- **DevOps & Version Control:** Git/Github, Docker
- **Other Tools & Technologies:** Microsoft Power Platform, Figma, Jira, L^AT_EX, Markdown, Machine Learning, Data Mining

HONORS AND AWARDS

- **Dean's Commendation for Academic Excellence (two-time recipient)**

Dec. 2023 & Aug. 2024

The University of Queensland
- **International Onshore Merit Scholarship**

Nov. 2022

The University of Queensland
- **Dean's List for Excellent Academic Performance**

Oct. 2022

QUT Faculty of Science
- **First Class Award Scholarship**

Nov. 2021

Jinling Institute of Technology

• QUT International Merit Scholarship - Science <i>Queensland University of Technology</i>	<i>May 2021</i>
• JIT Merit Student (two-time recipient) <i>Jinling Institute of Technology</i>	<i>Dec. 2020 & Nov. 2021</i>
• Third Class Award Scholarship <i>Jinling Institute of Technology</i>	<i>Dec. 2020</i>
• 2020 RoboCup China Open(Social Standard Platform) - Second Place <i>Chinese Association of Automation & RoboCup China Open Organizing Committee</i>	<i>Nov. 2020</i>
• 2020 RoboCup@Home Education Finals Standard Platform(1/10) - People's Choice Award <i>RoboCup@Home Education Organizing Committee & SoftBank Robotics & MathWorks</i>	<i>Jun. 2020</i>
• Chinese Collegiate Computing Competition - Winning Prize <i>Chinese Collegiate Computing Competition Organizing Committee</i>	<i>Jun. 2020</i>

CERTIFICATIONS

• Coursera: Machine Learning	<i>Aug. 2020</i>
• JIQIZHIXIN: Dive into Deep Learning	<i>Oct. 2021</i>
• Coursera: Programming for Everybody (Getting Started with Python)	<i>Dec. 2021</i>
• Coursera: Python Data Structures	<i>Jan. 2022</i>
• Coursera: Using Python to Access Web Data	<i>Feb. 2022</i>

PROFESSIONAL MEMBERSHIPS

• Australian Computer Society	<i>Oct. 2022 - Present</i>
• Chinese Association of Automation	<i>Apr. 2021 - Present</i>