

JIWEI LU

COMPUTER SCIENCE – SOFTWARE ENGINEERING & MACHINE LEARNING AND BIG DATA

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Visa: Temporary Graduate (subclass 485) for 5 years

ABOUT ME

Languages: English & Mandarin

Programming Languages: Python, C++, Java, JavaScript

Technical Skills: MySQL, SQLite, Docker, Git, Flask, HTML, CSS, Request, Linux, LabVIEW, GNS3, L^AT_EX
TensorFlow, OpenCV, Sklearn, Panda, NumPy, Matplotlib, Kivy, Tkinter

EDUCATION

University of Wollongong

Wollongong, NSW (2020–2022.12)

- Master of Computer Science
- Specialization in Software Engineering
- Specialization in Machine Learning and Big Data

WORK EXPERIENCE

Nan Tien Temple

Receptionist–Information Center

Wollongong, NSW (Nov 2021 - Nov 2023)

- Developed a book management software using Flask, React, SQLite to track book popularity
- Created data analytics dashboards, helping optimize inventory based on user trends
- Refactored backend APIs, reducing query execution time by 40%
- Collaborated remotely with a small team, following Agile methodologies

ASSIGNMENTS AND PROJECTS

Stock Prediction Web App

- Developed a web application for real-time stock price prediction using Reactjs and Flask
- Integrated AWS services for hosting and cloud-based model deployment
- Implemented a CI/CD pipeline, reducing deployment time by 40%
- Improved model accuracy by 18% using advanced ML algorithms (LSTM, TensorFlow)
- Enabled real-time data visualization, enhancing user experience

Temperature Prediction

- Implemented two predictive models: an RNN optimized with RMS, utilizing MAE as the loss function, and compared LSTM vs. GRU performance
- Developed a Transformer-based model addressing long-term dependencies encountered with LSTM.

Motion Object Pedestrian Count in Videos

- Employed Gaussian Mixture background modeling for motion object extraction
- Detected and tracked pedestrians using OpenCV's Haar Cascade detector, marking each individual and identifying the proximity to the camera

Social Media User Verification

- Developed a machine learning system to detect fake social media profiles
- Processed 20,000 user profiles using Python, NLP techniques, and cloud computing
- Followed the Big Data Analytics Lifecycle; employed regression, association rules, clustering, classification, text processing, and visualization
- Achieved 92% accuracy in detecting fake profiles using Scikit-learn and TensorFlow

Sports Event Simulation

- Simulated sports events considering athlete attributes, venue conditions, weather, match timings, and real-time athlete status
- Featured daily updates on scores, team rankings, and award standings

Web Applications

- Photo Sharing App, Calories App, Automating Emails App
- Flatemate's Bill Web App, Instant Dictionary Web App