Tianhao(Evan) Xu

+31-644214208 | tianhaoxu.com | tianhao.xu@student.uva.nl

EDUCATION

University of Amsterdam & Vrije Universiteit Amsterdam   Amsterdam, Netherlands
Master of Computer Science - Big Data Engineering Track   *Sep 2021 - Present*

Macau University of Science and Technology   Macau, China
Bachelor of Software Engineering   *Sep 2017 - Aug 2021*

- Thesis: Using Different Deep Learning Models to Detect COVID-19
- Core courses: Artificial Intelligence, Software Engineering, Network Programming, Computer programming, Operating Systems

PUBLICATIONS

Stock Price Prediction Based on Artificial Neural Network
X. Kan, M. Miao, L. Cao, T. Xu, Y. Li and J. Jiang
Machine Learning, Big Data and Business Intelligence (MLBDBI), 2020

RESEARCH INTERESTS

Data Mining, Interpretable AI, Machine Learning, and Healthcare

WORK AND RESEARCH EXPERIENCE

Research   September 2022 - Present
Advised by Smith W.L. J

- Using the deep neural network to diagnose and analyze the ECG which aims to see if the patient might have a specific heart condition such as Myocardial Infarction.

Data Engineer   April 2020 - June 2020
SAIC Motor Corporation Limited (SAIC Motor)   *Shanghai, China*

- Cleansed massive amounts of logs and abstracted a data model that can be reused by multiple businesses.
- Carried out ETL conversions to design data models that adapt to business changes and meet diversity requirements for massive data processing and query needs.

Research Intern   March 2020 - February 2021
Advised by Jiyue Jiang   *China*

- Researched the judgment of stock price based on an artificial neural network.
- Proposed a BP-based network prediction model, using the closing price of the company's stock as the prediction target. The results show that the model can predict stock prices within the allowed error range with high accuracy.

ACADEMIC PROJECTS

Machine Learning for Quantified Self | *Python*   Jun 2022 - Jul 2022
- Predicted the activity of each subject by using sensor data with time series analysis.
- Applied the optimized LSTM model to deal with multivariate time series. It was added by the dense layer and dropout, which greatly improved the accuracy of the training and test sets.

Recommender system: Personalize Expedia Hotel Searches | *Python*   Apr 2022 - Jun 2022
- Explored and analyzed the Expedia hotel dataset, which contained 5 million search hotel queries by real users.
- Leveraged data mining techniques to train the LightGBM model that can be adapted by the search engine to predict users' choices and rank the hotels based on the history searching records.

Use Multi-layer LSTM Model and Ensemble Learning to Detect Fake News | *Python* Nov 2021 - Jan 2022
- Detected and eliminated fake news in the early stages to avoid social hazards and help people obtain true information.
- Used LSTM and Bi-LSTM models to establish a fake news detection system. Simultaneously, some optimizations that ensemble learning methods and trained classifiers were made as well.

Data mining, analysis, and visualization for scientific communities | *Python* Sep 2021 - Nov 2021
- Processed and analyzed metadata cross-references of academic papers to create a directed graph representing the cross-citation relationships between different academic papers or journals. It can be found that the community detection algorithm fast-unfolding algorithm not only executes efficiently but also can solve the problem of unbalanced community division.
- Through scientific communities, it can be learned which communities are open and which are closed, and the characteristics of each scientific community's directed graph to discover the writing habits and other characteristics of researchers in a given discipline.

Using Different Deep Learning Models to Detect COVID-19 | *Python* Dec 2020 - May 2021
- Built an early screening model using deep learning techniques to distinguish COVID-19 from CT images of lungs in healthy cases. Helped doctors make rapid diagnoses and improve diagnostic efficiency from AI.
- Completed the comparison experiment of several deep learning models for image classification, DResUnet had had the best results with 85.54% Accuracy and 87.02% AUC.

TECHNICAL SKILLS

Languages: Chinese(Native), English(TOEFL 110)
Frameworks: Pytorch, Tensorflow
Programming: Python, SQL, C, C++, R, Java, Haskell
Libraries: numpy, pandas, Scikit-learn, NLTK, OpenCV, Keras, matplotlib, Seaborn, ggplot
Tools: Axure, PowerBI, MindManger, AWS, Docker

AWARDS & CERTIFICATION

AI and Machine Learning in Healthcare Summer School at the Cambridge Centre for AI in Medicine – September 2022
The Provincial Award in the 6th National Internet+ Innovation and Entrepreneurship Competition – October 2020
Huawei Cloud Artificial Intelligence Skills Certification – August 2020
Huawei Cloud Kunpeng Skills Certification – August 2020