

Tianhao(Evan) Xu

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EDUCATION

University of Amsterdam & Vrije Universiteit Amsterdam

Master of Computer Science - Big Data Engineering Track

Amsterdam, Netherlands

Sep 2021 - Aug 2022

Macau University of Science and Technology

Bachelor of Software Engineering

Macau, China

Sep 2017 - Aug 2021

- Thesis: Using Different Deep Learning Models to Detect COVID-19

WORK AND RESEARCH EXPERIENCE

Research Assistance

Advised by Smith W.L. J

September 2022 – Present

Netherlands

- Used 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, through the European ST-T Database.

Product Manager

Genzon Investment Group

July 2020 – August 2020

Shenzhen, China

- Participated in the digital transformation projects of the company, such as smart buildings, online service of enterprise.
- Conducted market and customer research, developed specific product planning and provided effective solutions in accordance with the company's strategic plan.
- Took charge of the product architecture, prototype design, completed the first phase of the plan, and promoted the development and release.

Data Engineer

SAIC Motor Corporation Limited (SAIC Motor)

April 2020 – June 2020

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

Advised by Jiyue Jiang

March 2020 - February 2021

China

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

PROJECTS

Machine Learning for Quantified Self | *Python*

Jun 2022 - Jul 2022

- Predicted the activity of each subject by using sensor data.
- 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 user's history searching records.

Use Multi-layer LSTM Model and Ensemble Learning to Detect Fake News | *Python*

Nov 2020 - Jan 2021

- Detected and eliminated fake news in the early stages to avoid social hazard and help people obtain the 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.

CR2: Scientific Communities | *Python*

Sep 2021 - Nov 2021

- This project is to process and analyse 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, the result showed which communities are open and which are closed, 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 - Sep 2020

- Built an early screening model using deep learning techniques to distinguish COVID-19 from CT images of lungs in healthy case. Helped doctors to 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.

Tencent Data Analysis | *Python, R*

Aug 2020 – Sep 2020

- Analyzed the membership system data of Bealead Group, evaluated the sales growth, and analyzed the correlation between the membership system construction and sales revenue.
- Established the sales forecast model of social platform through linear regression to determine the relevant characteristics of users with higher consumption, formulated accordingly marketing plan.
- Analyzed the user behavior data of Mobike, established a clustering model to group users, and made precise marketing recommendations based on the different characteristics of the user groups.

Telematics Big Data Platform | *Python*

Apr 2020 - Jun 2020

- Responsible for the architecture design, framework selection, platform construction and daily platform operation of the company's Telematics big data platform.
- Cleansed massive amounts of logs and abstracted a data model that can be reused by multiple businesses.
- ETL conversions are carried out to design data models that adapt to business changes and meet diversity requirements for massive data processing and query needs.

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

TECHNICAL SKILLS

Languages: Chinese(Native), English(Advanced)

Frameworks: Pytorch, Tensorflow, Django

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

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