Yinhan ZHANG

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EDUCATION

Sep 2020 — Jul 2024	Taiyuan University of Technology(211)	Shanxi, China

B.S. in Data Science and Big Data Technology

- **GPA :** 84.4/100 (first five semesters)
- **Relevant Courses:** Advanced Mathematics(93/100),Data Mining(92/100),Machine Learning(90/100),Python(91/100),Optimisation(88/100)
- **English :** CET6 551 :CET4 578, preparing for IELTS
- **Recent Interst:** DeepLearing in Protein Forecasting, GNN, Diffusion

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PUBLICATIONS

Nov 2022 — Feb 2023

Medical Image analysis

[J3] JieNing Wang,MengXiao Peng,**YinHan Zhang**,Cai Zhao,Wen Zheng. Survival analysis of patients with liver cirrhosis based on deep learning to quantify body composition. **2023 Liver International**(under review)
Work I Done:

1. Select ,process and annotate the CT and MRI images data.
2. Train segmentation models using CT and MRI images, attempt to design and improve models effect, and perform lesion segmentation on prostate, liver, and glomerulus
3. Body composition analysis on patients with liver cirrhosis, calculate the area of prostate tumour and glomerular lesion.
4. According to quantitative indicators, a survival prediction model is established through statistical analysis.

Nov 2022 — Apr 2023

Image Segement

[J3] Chenxi Yan, Yunjie Li, **Yinhan Zhang**, Wen Zheng. Efficient multi-scale spatial aware 3D abdominal multi-organ segmentation model. (under review)
Work I Done:

1. Research and experiment with existing multi-organ segmentation models, and compare the segmentation results.
2. Conduct experiments to compare the differences between 2D and 3D image segmentation.
3. Discussing and summarizing the design and improvement of the model with team members.

INTERNSHIPS

Jul 2022 — Aug 2023

Raspberry Pi Robot, Shenzhen Zhiyuan Education Co., Ltd.   Curriculum Development

Job Description:

1. Editing and revising primary and secondary school textbooks on basic machine learning algorithms.
2. Implementing a simple AI face recognition smart access control system and a teaching demo of a simulated factory assembly line using TensorFlow on **Raspberry Pi**.
3. Collaborating with team members to **simulate and implement** a practical teaching project on photo recognition for sorting items on a factory assembly line.

PROJECTS

Feb 2023 — May 2023

Surgical Data Ming

Research Assistant, Supervisor: Prof.Wen Zheng   Taiyuan University of Technology, CN

- Participate in a cooperative project between TYUT and Beijing Hosptial.

Work I Done:

1. Analyse and process structured data of 345 patients after kidney transplantation
2. Utilizing the postoperative temporal data from 1 to 12 months, perform temporal feature engineering and establish a postoperative risk prediction model using Logistic, SVM, and XGBoost algorithms in collaboration with Beijing Hospital.
3. **Optimized the interpretability** of the current prognosis model and defined a risk calculation formula to quantify postoperative risk based on GFR values.

Jun 2022 — Aug 2022	**Tencent Open Source Talent Training Program**	
	Trainee,Research Assistant, Mentor: Rachel Sun	*Tencent ,Shenzhen*

Work I Done:

1. Based on Tencent's open source ML project Angel,under the guidance of the Tencent mentor, I learn Hadoop, Spark, and algorithms related to graph representation learning and some GNN algorithms.
2. Deploy Tencent's high-performance machine learning platform Angel locally, develop the graph representation learning algorithm Struct2vec, and compare it with classic DeepWalk and Node2vec algorithms. The average intra-cluster similarity was improved by 0.1 in clustering, and the progress was improved by 0.26 in classification.

AWARDS

Apr 2022	**National Second Prize**
	The National College Student Internet+ Innovation and Entrepreneurship Competition.

Apr 2022 — Jun 2022	**National Second Prize**
	The China Software Cup National College Student Software Design Competition.

Nov 2022 — Dec 2022	**10th Place (10/482)**
	The 2022 BDCI Competition's Criminal sentence reduction prediction.

PERSONAL SUMMARY

Oct 2020	• **Hardworking** and striving for progress College Student working towards a TYUT in Data Science. • Formal member of the open-source learning organisation **DataWhale**.

My Characteristics:

1. **Strongly interested** in scientific research, proficient in reading and writing academic papers.
2. A strong ability to **code and create**, and I am willing to try to implement cutting-edge AI ideas.
3. **Self-motivation**,high stress resistance, and perseverance.
4. I am passionate about **AI for Science**.

AI Learning Project:

• I created this project to make the boring and difficult-to-understand algorithms of AI interesting, and to teach learners how to apply AI to real-life situations.
• I am trying to combine GPT with robotics to do some fun things.

Here is the Website link: http://ai.9998k.cn

EXTRA-CURRICULAR ACTIVITIES

Mar 2023 — Apr 2023	**Hands-on Learning of Deep Learning, DataWhale**	Course Assistant

• The DataWhale team I belong to contacted Professor Li Mu and organized the "Hands-on Deep Learning" course, attracted 9,027 students from 733 universities around the world to join the group for learning.
• I was one of ths, helping and solving problems for students during the learning process.

TECHNICAL SKILLS

Programming :	Pytorch/Tensorflow/Spark/C++

REFERENCES

Professor Wen Zheng from TYUT

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Dr. Jiaqi Wang from CUHK

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