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TIANCHANG LI

Dedicated to integrating advanced analytics and AI into traditional industries for optimized strategies and products

EDUCATION

Master of Science in Artificial Intelligence Engineering, *Northwestern University, GPA: 3.92/4.0* *December 2022*
- Advanced NLP, Deep Generative Model, Data Science, Big Data, Reinforcement Learning, HCI, Law & Governance

Bachelor of Science in Statistics & Computer Science, *University of Wisconsin-Madison, GPA: 3.63/4.0* *May 2020*
- Regression Analysis, Data Structure, Machine Learning, Computer Vision in Medical Image, Statistical Inference
- Award: Dean's list

SKILLS

- **Software:** Python, SQL, Tableau, Git, Docker, Kubernetes, AWS, Spark, R, Java, Linux, NoSQL
- **ML Libraries:** Pandas, Scikit Learn, Numpy, PyTorch, TensorFlow, Matplotlib
- **ML Models:** Regression, Decision Tree (Random Forest, XGBoost), SVM, Gaussian Mixture Models, KNN, K-Means, PCA, Deep Learning (CNN, RNN, LSTM, ResNet, YOLO), GAN (IPCGAN), Transformer (GPT, BERT, Swin)
- **AI Expertise:** Vision (super resolution, style transfer), NLP (sentiment analysis, text classification), Recommender

PROFESSIONAL EXPERIENCE

Machine Learning Algorithm Researcher *June - September 2022*
R&D Center - Zebra Technologies (#1 in mobile computing)
- **Enhanced retail check-out reliability** and **reduced theft** by implementing **3** cutting-edge computer vision systems (deep nets composed of *CNN, Auto-Encoder, Transformer, ResNet*) and restoration technique in *PyTorch*
- Built a system that boosted resolution of **17k** commercial good images and **doubled** recognition rate (by **30%**)
- Evaluated recent top ML architectures and **customized** them on target datasets to optimize pixel-wise recovery

AI Software Engineer *March - October 2022*
Center for Deep Learning - Northwestern University
- Deployed open-source tools (*Tensorboard*, *Kubeflow*) via *Docker containers and Kubernetes* to offer **visual feedback** and **automatic parameter tuning** which **increased productivity** of model development by **5 hours/run**
- Integrated the tools in model serving products to create seamless user experience which **attracted 2 investors**

Strategic Analyst *March - June 2022*
Horizon Therapeutics
- Identified **4 actionable insights** in **reducing claim denial rate** by analyzing patient journey with statistical models
- Excelled in active, **cross-functional communication** through a close collaboration with 2 biomedical consultants

RESEARCH WORK

Lu's Bioinformatics Lab, *University of Wisconsin-Madison* *January 2019 - July 2021*
- *Interpreting Polygenic Score Effects in Sibling Analysis* (2021), https://doi.org/10.1101/2021.07.16.452740
- **Identified false assumptions** in a golden approach for 10 years and **suggested alternatives** by data simulation
- Discovered **3 novel associations** between marriage and DNA that enriched downstream social studies by performing *regression analyse*s on **large-scale data** (2 million entries) from inception to completion in *R*

RELEVANT PROJECT

AI Contract Manager, *Adobe* *September - December 2022*
- Built language models that helps non-legal users **quickly extract condition clauses** in contracts and **organize risks** with a **90%** accuracy by applying *NLP* techniques and ML algorithms (*Gradient Boosting, Naïve Bayes, SVM*)
- Led developers to create a front-end prototype embedded in Acrobat that **involves human in the loop**

INVOLVEMENT & LEADERSHIP

WE22 Conference – by SWE *2022*
Team Leader, *UW-Madison BRIDGE International* *2017 - 2018*
- Facilitate smooth transitions for students from 20 countries by creating a friendly, culturally inclusive community