Andre Ye

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Work Experience

Research Intern @ Deepgram June 2022 – September 2022

Will work on developing novel and powerful speech deep learning models as a summer research intern with speech API company Deepgram.

Teaching Assistant @ Allen School March 2022 – Present

TA for: CSE 163 Intermediate Data Programming (Spr '22).

ML Crowdsourcing Research @ Social Futures Lab, Allen School February 2022 – Present

Working with PhD student Quanze (Jim) Chen to build more effective, consistent, and representative machine learning crowdsourcing frameworks to image-based annotation domains. Learn more about the project here.

Deep Learning Research @ Najafian Lab, UW Medicine March 2021 – Present

Developed a successful semantic segmentation deep learning system at the Najafian Lab. Utilized complex data flows and advanced computer vision mechanisms to maximize model success. Innovated new techniques in the deep learning segmentation of cellular objects. Learn more about the project here.

Volunteer Data Scientist at CoronaWhy April 2020 – May 2021

CoronaWhy is an international group of volunteers working to analyze and model COVID-19 data to aid the pandemic. Worked with fellow team members to develop deep learning models to explore literature; ran analyses of internal communication to boost team efficiency.

Publishing and Authorship

Author of *Deep Learning for Tabular Data* November 2021 – Present

Currently writing a second book published with Apress, an division of Springer Nature that specializes in IT publishing. *Deep Learning for Tabular Data* attempts to address a critical gap in coverage of recent advancements in the application of deep learning for tabular data, with a focus on encouraging the usage of deep learning in fields where traditional methods (e.g. statistical learning) are more dominant.

Author of *Modern Deep Learning Design and Applications* May 2021 – December 2021

Modern Deep Learning Design and Applications attempts to unify modern deep learning advancements and concepts through intuitive theory. Wrote 450+ pages worth of content, figures, and code; talked with deep learning paper authors; worked with a team of editors to produce a effective, well-written, marketable book. View more book info here.

Technical Reviewer November 2021 – Present

Testing code, determining the accuracy of author content, and making revisions and suggestions to increase clarity and communication in data science books. Currently reviewing: *Building Data Science Solutions with Anaconda* by Packt, *Deep Learning Model Optimization with Neural Network Intelligence* by Apress.

Data Science and Artificial Intelligence Writer and Editor March 2020 – April 2021

Have written over 350 data science and artificial intelligence articles here for various top data science publications. Awarded the Gold and Silver Medal from KDnuggets; Top Writer in AI and Technology by Medium. View a list of curated articles here

Competitions and Awards

Top 1%, 4% and Top 5% in Kaggle Deep Learning Competitions November 2020 – June 2021

- Placed in the top 1% (16th place, Gold) out of of 4245 teams in the Jane Street Group Market Prediction Competition. Developed a denoising autoencoder and nonlinear NN topology to predict stock prices.
- Placed in the top 4% (Silver) out of of 4373 teams in the Harvard Laboratory for Innovation Science's Mechanisms of Action competition. Developed a solution over several months involving heavy feature engineering and an ensemble of deep neural network and TabNet models.
- Placed in the top 5% (Silver) out of of 1547 teams in the Royal Australian College of Radiologists Catheter and Line Position Challenge. Developed an ensemble of deep learning models to identify catheters in an X-ray and classify their placement. Used transfer learning, self-supervised learning, and extensive augmentation.
- Attained Kaggle Master rank, the top 2% position within the Kaggle community of over 160,000 data scientists.

Global Nominee for NASA Space Apps Hackathon October 2020

Coded and presented a solution for NASA's Space Apps Hackathon. A large satellite-collected dataset from NASA databases was analyzed and modelled to predict the economic impact of wildfires. Was selected as one of two nominees to represent our region in international judging by NASA, ESA, and other international space agencies.

Education

University of Washington Seattle, Washington

Major in Computer Science, minor in Philosophy. Early Entrance Program.

Technical Skills

Languages: Proficient – Python, Familiar – SQL, HTML + CSS + JS, PHP, Java
Libraries: TensorFlow/Keras, scikit-learn, numpy, pandas, matlotlib, seaborn, OpenCV, Flask
Skills: Computer vision, NLP, self-supervised learning, transfer learning, deep learning model compression, machine learning modeling, ML explainability/interpretability, data mining, data analysis, data visualization
Other: LaTeX, Jupyter