

Ting-Chih Chen

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Education

Virginia Polytechnic Institute and State University

M.S. in Computer Science and Applications

- GPA: 3.78/4.0

Virginia, USA

2022 - 2023

National Changhua University of Education

B.S. in Computer Science and Information Engineering

- GPA: 3.4/4.0

Changhua, Taiwan

2017 - 2019

Publications

- MetaSumPerceiver: Multimodal Multi-Document Evidence Summarizer for Fact-Checking
Ting-Chih Chen, Chia-Wei Tang and Chris Thomas
EACL2024 Submission
- Application of LSTM Neural Network in Stock Price Movement Forecasting with Technical Analysis Index
Ting-Chih Chen and Chin-I Lee
IAM2020

Experiences

Virginia Polytechnic Institute and State University

RA in Vision lab

- Developed a multimodal claim generation method and a multiclass classification on news articles.
- Built up an evidence summarization model to assist fact-checkers in distinguishing the truthfulness of claims.

Virginia, USA

2022 - 2023

Virginia Polytechnic Institute and State University

TA

- CS3114 Data Structures and Algorithms
- CS5024 Ethics and Professionalism in Computer Science

Virginia, USA

2022 - 2023

Virginia Polytechnic Institute and State University

RA in NLP lab

- Built up an instrumental video dataset and conducted research on inductive and abductive reasoning.
- Employed SOTA multimodal models to extract valuable insights from the dataset and induce knowledge from LLMs, resulting in an impressive Bert score F1 of 86.5%.

Virginia, USA

2022

National Center for High-Performance Computing

Research intern

- Built up a boat image dataset for research and explored YOLO2 extensively in object detection task, achieving an 82% mAP.

Taichung, Taiwan

Summer 2019

University Projects

Heterogeneous Graph Network for MP-Doc VQA

Multimodal Vision

- Handled multimodal data, and constructed knowledge graphs for multimodal contexts to capture data relationships.
- Employing a GNN powered by T5, analyzed these graphs, resulting in a 53% accuracy.

Virginia, USA

Spring 2023

Fine-Grained Image Captioning

Deep Learning

- Developed an image captioning system using ExpansionNet with the Flickr30K dataset
- Assessed the effectiveness of visual embeddings. The system achieved an impressive BLEU-1 score of 67.76%.

Virginia, USA

Spring 2023

Removing Perturbation from Noise Image

Security

- Designed an auto-encoder to eliminate disruptions in deepfakes, examining its transferability across various deepfake models.
- Validated that the perturbed images had no adverse effects on the performance of other deepfake models, resulting in an MSE score of 0.75.

Virginia, USA

Fall 2022

News Category Prediction

Machine Learning

- Applied Naive Bayes with TF-IDF for news category prediction.
- Assessed the model's performance using F1 score, accuracy, and confusion matrix, achieving an 63% accuracy.

Virginia, USA

Spring 2022

Coursework

Graduate & Undergraduate Courses

- Mathematics: Linear Algebra, Probability
- Data Science: Data Mining, Data Analytics
- Security: Defending Against ML-powered Adversaries
- Artificial Intelligence: Machine Learning, Deep Learning, Computer Vision, Multimodal Vision

Skills

Programming Language	Python, Java, C/C++, JavaScript, HTML/CSS, PHP
Scientific Packages	PyTorch, Scikit-learn, Tensorflow, Hugging Face, OpenCV
Platform	AWS