

Tung Tran, Ph.D.

Machine Learning Researcher & Engineer

Published ML researcher and practitioner with several ML papers in high-impact, peer-reviewed academic journals in a variety of knowledge domains including biomedical literature, EHR data, and social media content. Specialized in deep learning for natural language processing (NLP) with a dissertation focused on advanced information and relation extraction. Resident of the Tampa Bay area in Florida. US Citizen.

WORK EXPERIENCE

AI/NLP Engineer 08/2020 – Present

Cyber and Information Warfare Division, IDS International, Arlington, VA

- Developed methods for automatic content generation, for the purpose of social media environment replication, including face generation and natural language text generation
- Developed methods for social media content analysis including automatic spam detection, bot detection, and image object recognition

Graduate Research Assistant 06/2016 – 08/2020

Institute for Biomedical Informatics, University of Kentucky, Lexington, KY

- Developed methods for relation extraction from natural language text in various domains
- Developed methods for predicting mental conditions based on narratives from clinical notes
- Published several machine learning papers in reputable journals and conferences

Summer Research Intern 06/2018 – 09/2018

National Library of Medicine, National Institutes of Health, Bethesda, MD

EDUCATION

Ph.D. in Computer Science 2014 – 2020

Computer Science Department, University of Kentucky, Lexington, KY

- Dissertation: “*Deep Neural Architectures for End-to-End Relation Extraction*”
- Dissertation Advisor: Ramakanth Kavuluru, Ph.D.
- Graduated with GPA of 4.0 out of 4.0

B.S. in Computer Science 2010 – 2014

Computer Science Department, University of Kentucky, Lexington, KY

- Graduated *Cum Laude* with GPA of 3.5 out of 4.0

TECHNICAL SKILLS

Python; Tensorflow; Keras; PyTorch; Word2Vec; GloVe; Scikit-learn; NLTK; Numpy; Pandas; Huggingface (transformers) library; Linux; Bash; Docker; HTML; JavaScript; CSS

RESEARCH INTERESTS

Machine Learning; Deep Neural Networks; Natural Language Processing; Information Extraction; Biomedical Informatics; Image Classification and Analysis

RESEARCH GRANT ACTIVITY

NIH Grant R01LM013240, “Advanced End-to-End Relation Extraction with Deep Neural Networks.”

- Developed core proposal ideas and co-authored grant proposal draft with Principal Investigator Ramakanth Kavuluru. **Awarded \$1,356,734 from 2020 to 2024.** ([Details](#))

SELECTED JOURNAL PAPERS

The following are first-authored papers published in peer-reviewed journals that are highly reputable for their respective fields.

1. **T. Tran**, M. Ickes, J.W. Hester, and R. Kavuluru. Identifying Current Juul users among Emerging Adults through Twitter Feeds. *International Journal of Medical Informatics*, 2021. ([Link](#))
2. **T. Tran**, R. Kavuluru, and H. Kilicoglu. Attention-Gated Graph Convolutions for Extracting Drug Interaction Information from Drug Labels. *ACM Transactions on Computing for Healthcare (ACM Health)*, 2021. ([Link](#))
3. **T. Tran** and R. Kavuluru. Social Media Surveillance for Perceived Therapeutic Effects of Cannabidiol (CBD) Products. *International Journal of Drug Policy*, 2020. ([Link](#))
4. **T. Tran** and R. Kavuluru. Distant Supervision for Treatment Relation Extraction by Leveraging MeSH Subheadings. *Artificial Intelligence in Medicine*, 2019. ([Link](#))
5. **T. Tran** and R. Kavuluru. An End-to-End Deep Learning Architecture for Extracting Protein-Protein Interactions Affected by Genetic Mutations. *Database: Journal of Biological Databases and Curation*, 2018. ([Link](#))
6. **T. Tran** and R. Kavuluru. Predicting Mental Conditions Based on “History of Present Illness” in Psychiatric Notes with Deep Neural Networks. *Journal of Biomedical Informatics*, 2017. ([Link](#))