TUAN M. LAI

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EDUCATION

University of Illinois at Urbana-Champaign *2020 - Present*
PhD in Computer Science · Deep Learning · Natural Language Processing

Purdue University *2018 - 2020*
MSc in Computer Science · GPA: 3.94/4.0

Korea Advanced Institute of Science and Technology (KAIST) *2013 - 2017*
BSc in Computer Science · GPA: 3.96/4.3 · Department Rank: 1/37

EXPERIENCE

Adobe Research (Remote - San Jose, US) *May 2020 - August 2020*
Natural Language Processing Research Intern

· Developed state-of-the-art deep learning models for NLP tasks such as keyphrase extraction and coreference resolution. Proposed a novel semi-supervised learning algorithm for leveraging the large amount of unlabeled data available online.

Adobe Research (San Jose, US) *May 2019 - Dec 2019*
Natural Language Processing Research Intern

· Developed novel deep learning models for tasks such as natural language understanding, question answering, dialog state tracking, and multimodal information retrieval.
· Published research papers at reputable conferences (EMNLP 2019, ICASSP 2020). Filed three patents.

Adobe Research (San Jose, US) *September 2017 - May 2018*
Data Science Research Intern

· Developed the frontend and the backend of a mobile-based intelligent shopping assistant. An in-store user only needs to take a picture or scan the barcode of a product of interest and then can talk to the assistant about the product.
· Developed various question answering and information retrieval models using deep learning. Built many web applications to showcase the models to researchers and product teams at Adobe.
· Published many research papers (COLING 2018, NAACL 2019, IEEE CG&A 2019). Filed one patent.

Google (Mountain View, US) *May 2017 - August 2017*
Softare Engineering Intern

· Developed deep learning models for extracting measurements and currencies from web documents.
· Improved the workflow for generating training data for the models.
· Performance Rating: Superb.

Google (London, UK) *June 2016 - September 2016*
Software Engineering Intern

· There were two errors, each occurring at least a million times per day in the Android Google Search App. I implemented new information cards that show up when the errors occur and assist the users in resolving the errors. The implemented information cards have been fully launched in production.

PATENTS

A simple but effective BERT model for dialog state tracking on resource-limited systems (Patent Filed 06/2020)

Training of Neural Network based Natural Language Processing Models using Dense Knowledge Distillation (Patent Filed 12/2019)

Utilizing a gated self-attention memory network model for predicting a candidate answer match to a query (Patent Filed 9/2019)

Generating and utilizing classification and query-specific models to generate digital responses to queries from client devices (Patent Filed 4/2018)

JOURNALS

Sugeerth Murugesan, Sana Malik, Fan Du, Eunyee Koh, **Tuan Manh Lai**. *DeepCompare: Visual and Interactive Comparison of Deep Learning Model Performance*. IEEE Computer Graphics and Applications 2019.

RIGOROUSLY REFEREED CONFERENCE PAPERS

Tuan Manh Lai, Quan Hung Tran, Trung Bui, Daisuke Kihara. *A Simple but Effective BERT Model for Dialog State Tracking on Resource-Limited Systems*. ICASSP 2020.

Tuan Lai *, Quan Hung Tran *, Trung Bui, Daisuke Kihara. *A Gated Self-attention Memory Network for Answer Selection*. EMNLP 2019.

Tuan Manh Lai, Trung Bui, Sheng Li. *A Review on Deep Learning Techniques Applied to Answer Selection*. COLING 2018.

Quan Hung Tran, **Tuan Manh Lai**, Gholamreza Haffari, Ingrid Zukerman, Trung Bui, Hung Bui. *The Context-dependent Additive Recurrent Neural Net*. NAACL HLT 2018.

OTHER CONFERENCE/WORKSHOP PAPERS

Ilja Gubins,,, **Tuan Manh Lai**,,, Fa Zhang (many authors). *Classification in Cryo-Electron Tomograms*. Eurographics Workshop on 3D Object Retrieval 2019.

Florent Langenfeld,,, Daisuke Kihara, **Tuan Manh Lai**,,, Matthieu Montes (many authors). *Protein Shape Retrieval Contest*. Eurographics Workshop on 3D Object Retrieval 2019.

Tuan Manh Lai, Trung Bui, Nedim Lipka, Sheng Li. *Supervised Transfer Learning for Product Information Question Answering*. IEEE ICMLA 2018.

Tuan Manh Lai, Trung Bui, Sheng Li, Nedim Lipka. *A Simple End-to-End Question Answering Model for Product Information*. ACL workshop on Economics and Natural Language Processing 2018.

Cuong Van Vu Nguyen, **Tuan Manh Lai**, Duong Anh Nguyen, Okjoo Choi. *CodingGame: A Platform to Learn Programming via Games*. Korea Computer Congress 2017.

Sukhwan Jung, **Tuan Manh Lai**, Aviv Segev. *Analyzing Future Nodes in a Knowledge Network*. IEEE International Congress on BigData 2016.