Ngan Dong
Curriculum Vitae

PERSONAL DETAILS

Birth	July 24, 1988
Address	Knoevenagelweg 3, 30165, Hannover, Germany
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G. Scholar	https://scholar.google.com/citations?user=M4zbOcsAAAAJ

EDUCATION

PhD Computer Science `2019 - 2022`
Leibniz University Hannover
  Research Topic: "Deep learning for precision medicine"

MSc. Computer Science `2011-2013`
Washington State University
  Thesis: "Natural Language Generation from Graphs"

BSc. in Computer Science, Honor program `2006-2010`
VNU University of Engineering and Technology

EXPERTISE

- More than 5 years of developing Machine Learning algorithms at industry scale for Recommendation systems and various Natural Language Processing tasks.
- Nearly 3 years working on Machine Learning models for Biological problems which focus on Data Integration and involve the use of Language modeling for Protein representation learning, Graph Representation Learning techniques, Multi-task learning, and Feature Selection.

WORK EXPERIENCE

Research Assistant `2019-Present`
Leibniz University Hannover, Full-time
  - Working on the PRESENt project[1] which aims at integrating clinical, biological, and big data research to advance our understanding of norovirus gastroenteritis.
  - Developed state-of-the-art models for various bioinformatic problem which focus on multiple data sources integration, network analysis, multitask learning, graph representation learning, and feature selection.
  - Developed a cochlear implant outcome prediction model from real patient data. The work involved heavy data preprocessing tasks, feature extraction, feature selection, and model development.
  - Perform some others data retrieval, data pre-processing tasks and specialized analysis on

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[1]http://www.translationsallianz.de/train-plattformen/train-projects/present/

the results retrieved from wet-lab experiments given by our biologist partners.

Research Engineer(Machine Learning) `2014-2019`
FPT Technology Research Institute, Full-time

- Being one of the first ML researchers working on Natural Language Understanding module for FPT.AI[2] - one of the first and largest comprehensive AI platforms in Vietnam.
- Worked on (i) Recommendation systems for e-commerce websites and online news, (ii) Sentiment classification for electronic retailer, (iii) User segmentation, and (iv) online-news topic modeling

Software Developer `2013-2014`
Citigo Joint stock Company., Full-time

Work as a full-stack developer on out-sourcing projects for Australian customers. Responsible for maintaining the existing systems, developing, testing and deploying new functionality on customers' production servers.

Research Assistant `2011-2013`
Artificial Intelligence laboratory, WSU

- Develop GNLG - a Natural Language Generation (NLG) system for Resource Description Framework (RDF) Graphs.
- Build ontology models for cooking recipes and data from a defense-related project about people in a military- controlled area

Teaching Assistant `2010-2011`
Computer Science Department, VNU University of Engineering and Technology

- Teaching Assistant for various bachelor level programming courses.

Research Assistant `2009-2010`
Computer Science Department, VNU University of Engineering and Technology

- Research on POS taggers for Vietnamese using Conditional Random Fields and Hidden Markov Models.
- Develop a Vietnamese collocation extractor using different statistical methods

SKILLS

Languages	Vietnamese (mother tongue), English (fluent), German (basic)
Code related	Python, PyTorch, pytorch-geometric, sklearn, pandas, numpy, networkx

PUBLICATIONS

Ngan Dong, Stefanie Mücke, Megha Khosla, *"MuCoMiD: A Multitask graph Convolutional Learning Framework for miRNA-Disease Association Prediction"*, submitted to IEEE/ACM TCBB, 2021.

Ngan Dong, Graham Brogden, Gisa Gerold, Megha Khosla, *"A multitask transfer learning framework for the prediction of virus-human protein-protein interactions"*, BMC Bioinformatics, 2021.

Ngan Dong, Megha Khosla, *"A Multitask Convolutional Learning Framework for miRNA-Disease Association Prediction"*, BIOKDD 2021.

Ngan Dong, Megha Khosla,, *"A multitask transfer learning framework for Novel virus-human protein interactions"*, ICLR Workshop on AI for Public Health, 2021.

Ngan Dong, Megha Khosla, *"Towards a consistent evaluation of miRNA-disease association prediction models."*, 2020 IEEE International Conference on Bioinformatics and Biomedicine (BIBM). IEEE, 2020.

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[2]https://fpt.ai/

Ngan Dong, Megha Khosla. "*Revisiting Feature Selection with Data Complexity for Biomedicine.*" 2020 IEEE 20th International Conference on Bioinformatics and Bioengineering (BIBE).

Kim Anh Nguyen, **Ngan Dong**, Cam Tu Nguyen "*Attentive Neural Network for Named Entity Recognition in Vietnamese*", 2019 IEEE-RIVF International Conference on Computing and Communication Technologies (RIVF). IEEE, 2019.

Ngan Dong, Larry Holder, "*Natural Language Generation from Graphs*", International Journal of Semantic Computing.Vol. 8, No. 3, pp. 335-384, 2014

ACADEMIC SERVICES

Teaching assistant for Machine Learning for Graphs course (2021)
Seminar supervisor for Artificial Intelligence course (2021)
Msc. students supervised/co-supervised
   Johanna Schrader - Thesis title: Application of Graph Structure Learning in Biological Data Analysis (2021)
   Luo Yi - Thesis title: At the Interface between Biomedical Research and Software engineering (2021)

HONOR AND AWARDS

August 2011 – May 2013: Vietnam Education Foundation (VEF) scholarship, which was funded by the US government.

July 2010: Scholarship for Digital Signal Processing Academy Summer School

Dec 2009: Outstanding female student in Information Technology
       Scholarship from the Ministry of Information and Communication, Vietnam

Oct 2007: VNU University of Engineering and Technology Outstanding student

REFERENCES

Available upon request.