Ngan Dong

Curriculum Vitae

PERSONAL DETAILS

Birth	July 24, 1988
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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

RESEARCH INTEREST

Bio-informatics, Graph Representation Learning, Feature Selection, Multi-task Learning, Data Integration

HONOR AND AWARDS

August 2011 – May 2013: Vietnam Education Foundation (VEF) scholarship

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

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.
- Research Interest cover the theme of Personalized Medicine, which focus on multiple data

[1] http://www.translationsallianz.de/train-platforms/train-projects/present/?L=1

sources integration, network analysis, multitask learning, graph representation learning, and feature selection.

- Developed two multitask learning frameworks for the miRNA-disease association and virus-human protein interaction prediction problems.
- Developed a cochlear implant outcome prediction model from patient data. The work involved heavy data preprocessing tasks, feature extraction, feature selection, and model development.
- Helped biologists to analyze proteomics data retrieved from wet-lab experiments, pathway functional analysis, protein functional analysis, sequence alignments, cross-platform id matching, and some other works related to data preprocessing for proteomics researchers.
- Supervised two master thesis, being one tutor for the Machine Learning for Graphs course, and helped supervise students in the AI seminar course.

Software 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 largest comprehensive AI platforms in Vietnam. Working on Intent Detection, Nested Named Entity Recognition (Nested NER) engine.
- Build the training and testing data and participating in building a deep learning model for sentiment classification for an electronic retailer so that they can improve their services.
- Use topic modeling, ranking algorithms, NER to built a Keyword Extraction module; use content-based filtering and hybrid method to develop and maintain various types of recommender systems (articles, ads, video), personalization for VnExpress (one of the largest online news pages in Vietnam). The system was on production and according to the site traffic, article recommendation accounted for around 70% of the whole site page view.
- Work on demographic prediction problem based on browsing behavior of users. The model was tested by our customer.

Software Developer 2013-2014

Citigo Joint stock Company., Full-time

Work on out-sourcing projects that were mainly based on Spring MVC framework. I worked as a full stack developer (both back end and front end).

Research Assistant 2011-2013

Artificial Intelligence laboratory, WSU

- Develop GNLG - a Natural Language Generation (NLG) system for Resource Description Framework (RDF) Graphs. GNLG is portable, reusable and requires less annotation, knowledge base preparation effort than existing NLG systems.
- Review the state of the art in recommender systems, their pros and cons, the scalability issue and existing solutions.
- Build ontology models for cooking recipes and data from a defense-related project about people in a military- controlled area

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)

[2]https://fpt.ai/

	German (a little bit, enough for my daily life)
Programming languages	Python(since 2018), Java(till 2018), pytorch, R (familiar), Latex

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*", To be appeared in 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.

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

HOBBIES AND INTEREST

Watching films, reading books, learning new things and especially like travelling

REFERENCES

Available upon request.