Minh Pham

Los Angeles, California
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Research Interests

- Automatic Data Integration
- Table-text Understanding
- Deep Learning
- Knowledge Graph Construction

Education

University of Southern California **Sep 2015 – Now**

Ph.D. Candidate in Computer Science

- Relevant Courses: Machine Learning, Building Knowledge Graphs, Advanced NLP, Representation Learning
- GPA: 3.88/4.0
- Advisors: Craig A. Knoblock and Muhao Chen

Ho Chi Minh City University of Technology **Sep 2009 – Jan 2014**

Bachelor of Engineering in Computer Science

- Thesis Topic: Wikipedia-based Entity Disambiguation
- GPA: 8.5/10
- Advisors: Tru Hoang Cao

Selected Publications

Pham, M., Knoblock, C., Chen, M., Vu, B. and Pujara, J., *SPADE: A Semi-supervised Probabilistic Approach for Detecting Errors in Tables.* In 30th International Joint Conference on Artificial Intelligence (IJCAI 2021).

Pham, M., Knoblock, C. and Pujara, J., *Learning Data Transformation with Minimal User Effort.* In 2019 IEEE International Conference on Big Data (IEEE BigData 2019).

Pham, M., Alse, S., Knoblock, C., and Szekely, P., *Semantic Labeling: A Domain-Independent Approach.* In 15th International Semantic Web Conference (ISWC 2016).

Gil, Y., Garijo, D., Khider, D., Knoblock, C.A., Ratnakar, V., Osorio, M., Vargas, H., **Pham, M.**, Pujara, J., Shbita, B. and Vu, B., *Artificial intelligence for modeling complex systems: taming the complexity of expert models to improve decision making.* In ACM Transactions on Interactive Intelligent Systems 2021

Research Experience

Robust and Proactive Error Detection and Correction **Dec 2019 – Now**

Research Assistant, Center on Knowledge Graphs, USC/ISI

- Develop an approach to verify information in tabular data with table-to-text controlled text generation and natural language inference
- Developed a semi-supervised error detection approach that leverages Probabilistic Soft Logic and deep neural networks to detect syntactic errors in tables (IJCAI 2021)

MINT Project – http://mint-project.info **Sep 2017 – Dec 2019**

Research Assistant, Center on Knowledge Graphs, USC/ISI

- Designed and developed a modular transformation pipeline to unify domains-specific data from different scientific formats including GPM, GLDAS or ISRIC
- Developed a novel unsupervised approach to transform string values between different formats without labeled examples (IEEE BigData 2019)

PRINCESS Project – https://cra.com/projects/princess **Jan 2016 – Sep 2017**

Research Assistant, Center on Knowledge Graphs, USC/ISI

- Developed a machine learning approach for domain-independent semantic labeling, which can achieve comparable results on different domains without fine-tuning (ISWC 2016)

John von Neumann Institute, Vietnam National University **Sep 2014 – May 2015**

Research Assistant

- Improved an existing learning-based entity linking system by candidate searching and rule-based coreference resolution.

Professional Experience

Nuance Communications Inc. **Jun 2019 - Aug 2019**

Research Intern, Artificial Intelligence and Language Lab

- Developed an unsupervised approach for an internal entity resolution problem using Probabilistic Soft Logic and automatic data profiling

DataFirst JSC Co. **Feb 2015 - Aug 2015**

Research Programmer

- Extracted real estates' information from millions of Vietnamese online listings with high accuracy for market analysis.

East Agile **Jun 2014 – Aug 2014**

Software Engineer Intern

- Developed and maintained an in-house video sharing platform using Ruby on Rails, CoffeeScript, HTML5 and CSS.

Teaching Experience

University of Southern California **2016 - 2021**

Teaching Assistant, DSCI 558: Building Knowledge Graphs *Los Angeles, California*

- Designed and evaluated course examinations, written assignments, and weekly quizzes
- Presented several sessions of lectures & research seminars to the class

Awards and Scholarships

Best Paper Award, ISI Graduate Student Symposium, University of Southern California **2019**

Title: Learning Data Transformations with Minimal User Effort

Vietnam Education Foundation (VEF) Fellowship for Ph.D. study in US **2015**

$54,000 for 35 selected Fellows in the whole country

Technical Skills

- **Machine Learning**: PyTorch, Tensorflow, Keras, Scikit-learn, Snorkel
- **Languages**: Python, Java, C++, SQL
- **Semantic Web**: RDF, Turtle, SPARQL
- **High Performance Computing**: Dask, Spark
- **Databases**: ElasticSearch, MongoDB

Leadership / Extracurricular

Vietnam Education Foundation Fellows and Scholars Association (VEFFA) **2016 - 2017**

Board of Executives

- Organized VEFFA annual conferences and events.
- Organized mock interviews for more than 60 Vietnam Education Foundation (VEF) Scholarship applicants.
- Led a group of 20 mentors to support VEF Scholarship applicants in preparing their applications.

PAKDD 2015 Conference & ACML 2014 Conference **2014 - 2015**

Website Administrator and Volunteer

- Designed and managed conference website.
- Monitored presentation sessions in the conference.