

# Binh Vu

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## RESEARCH INTERESTS

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Machine Learning, Semantic Web, Knowledge Graph Construction

## EDUCATION

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- **Ph.D. Student in Computer Science** Aug 2016 - Present  
University of Southern California, Computer Science Department, Los Angeles, CA  
Advisor: Professor Craig Knoblock
- **Bachelor of Engineering in Computer Science** Aug 2010 - Jan 2015  
HCMC University of Technology, Ho Chi Minh, Vietnam  
Thesis: *Wikipedia-based Entity Disambiguation using Deep Learning*, advisor Professor Tru Cao

## RESEARCH EXPERIENCE

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- **University of Southern California, Information Sciences Institute**, Marina del Rey, CA Aug 2016 - Present  
Graduate Research Assistant, *Center on Knowledge Graph*
  - **Learning Semantic Models of Data Sources** Oct 2017 - Present  
Learning semantic models that describes structured data sources using ontologies. The semantic models are used to automatically publishing data to knowledge graphs.
  - **Identifying potential company hardware/software vulnerabilities** Oct 2016 - Sep 2017  
Given a company, auto-crawling online sources to retrieve expertise of its employees, then predict the software and hardware used in the company. The list of vulnerabilities is obtained by linking the software and hardware to the CVE database.
- **Rakuten Inc.**, Tokyo, Japan Jun 2015 - May 2016  
Software Engineer, *Big Data Department*
  - **Fraud Detection in ID Hijacking and Payment**: Developed a near real-time streaming system that analyses time-series data and generates warning when attacks happens
- **HCMC University of Technology**, Ho Chi Minh, Vietnam Jun 2014 - Dec 2015  
Undergraduate Research Assistant, *Computer Science Department*
  - **Wikipedia-based Entity Disambiguation using Deep Learning**: Using autoencoders to extract latent features of entities in Wikipedia articles for the name entity disambiguation problem

## KEY HONORS

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- ISI Distinguished Top-Off Fellowship April 2016
- Vietnam Education Foundation Fellowship to pursue Ph.D. degree in the U.S 2016
- Outstanding Honor Student Award 2011 - 2014

## SELECTED PUBLICATIONS

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- **Binh Vu**, Craig Knoblock, and Jay Pujara. 2019. *Learning Semantic Models of Data Sources Using Probabilistic Graphical Models*. In The World Wide Web Conference, pp. 1944-1953.
- **Binh Vu**, Jay Pujara, and Craig Knoblock. 2019. *D-REPR: A Language for Describing and Mapping Diversely-Structured Data Sources to RDF*. In The Tenth International Conference on Knowledge Capture (K-CAP).

## TECHNICAL SKILLS

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- **Languages**: Python, Rust, Java, Javascript (Full-stack Web Developer)
- **Technologies**: Pytorch, Tensorflow, Docker, Elasticsearch, Databases (MySQL, Postgres, Redis, Cassandra), Jenkins, Travis, etc.
- **Operating Systems**: Linux, MacOS