

# 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 describe structured data sources using ontologies. The semantic models are used to automatically publish data to knowledge graphs.
  - **Identifying potential company hardware/software vulnerabilities** Oct 2016 - Sep 2017  
Auto-crawling online sources to retrieve expertise of employees of a company, then predicting the software and hardware used in the company. A 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 warnings when attacks happen
- **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