

# Yiu-Chang Lin

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## SUMMARY

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Five years of NLP/ML/DL experience in academia and industry. Strong with both machine learning algorithms and end-to-end NLP pipeline implementation, as well as academic publication. Full stack ML researcher and engineer from proof of concept to production. Significant knowledge and solid hands-on skills in various topics including **query understanding, item product linking, taxonomy classification, product search re-ranking, multi-lingual entity discovery & linking.**

## EXPERIENCE

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- Apple** 02/2020 – present  
*Machine Learning Engineer*
- Rakuten USA, Boston MA** 08/2016 – 01/2020  
*Research Scientist II*
- Query Understanding (classification <sup>[2]</sup> and segmentation <sup>[4]</sup>)**
  - Item Product Linking**
  - Product Taxonomy Classification**
  - Product Search Re-ranking (Learning to Rank)**
  - Rakuten Data Challenge and SIGIR 2018 eCommerce Workshop <sup>[1][3]</sup>**
- Carnegie Mellon University, Pittsburgh PA** 08/2014 – 08/2016  
*Research Assistant*      *Advisor: Prof. Eduard Hovy*
- Learning Image and Text Semantic Relatedness**
  - Trilingual Entity Linking and Discovery <sup>[7][9]</sup>**
  - Word Sense Disambiguation via PropStore and OntoNotes <sup>[10]</sup>**
- Johns Hopkins University HLTCOE, Baltimore, MD** 06/2015 – 08/2015  
*Research Staff*      *Advisor: Prof. James Mayfield & Mark Dredze*
- SCALE 2015: Chinese Entity Discovery and Linking <sup>[8]</sup>**
- National Taiwan University Speech Processing Lab, Taipei, Taiwan** 09/2011 - 06/2013  
*Undergraduate Research Assisatnt*      *Advisor: Prof. Lin-Shan Lee*

## Latent Topic Modeling (Probabilistic Latent Semantic Analysis & Latent Dirichlet Allocation)

## Minimum Phone Error Model Training on Merged Acoustic Units for Transcribing Bilingual Code-Switched Speech <sup>[1]</sup>

### EDUCATION

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<b>M.S. in Language Technology, Carnegie Mellon University (CMU)</b>	<b>08/2014 – 08/2016</b>
Language Technology Institute (Advisor: Prof. Eduard Hovy)	
<b>B.S. in Electrical Engineering, National Taiwan University (NTU)</b>	<b>09/2009 – 06/2013</b>
College of Electrical Engineering and Computer Science	

### TECHNICAL SKILLS

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<b>Programming languages</b>	Python, Java, C/C++, MATLAB, R, UNIX shell script
<b>Tools/Framework</b>	Hadoop, Hive, PySpark, Elasticsearch, Lucene, Amazon Web Service (AWS), Google Cloud Platform (GCP), Kubernetes, Docker, UIMA Framework
<b>Machine Learning</b>	TensorFlow, PyTorch, Keras, XGBoost, scikit-learn
<b>Natural Language Processing</b>	FastText, BERT, MeCab, CRFsuite, Stanford CoreNLP API

### PUBLICATIONS

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- [1] **Yiu-Chang Lin**, Pradipto Das, Andrew Trotman, Surya Kallumadi, "A Dataset and Baselines for e-Commerce Product Categorization" (ACM ICTIR 2019)
- [2] **Yiu-Chang Lin**, Ankur Datta, Giuseppe Di Fabbrizio, "E-commerce Product Query Classification Using Implicit User's Feedback from Clicks" (IEEE Big Data 2018)
- [3] **Yiu-Chang Lin**, Pradipto Das, Ankur Datta, "Overview of the SIGIR 2018 eCom Rakuten Data Challenge" (eCom Workshop, SIGIR 2018)
- [4] **Yiu-Chang Lin**, Giuseppe Di Fabbrizio, Ankur Datta, "Query Segmentation via RNN Encoder Decoder Framework" (eCom Workshop, SIGIR 2017)
- [5] Xuezhe Ma\*, Nicolas R Fauceglia\*, **Yiu-Chang Lin**\*, Eduard Hovy, "CMU System for Entity Discovery and Linking at TAC-KBP 2017" (*TAC KBP 2017*)
- [6] Aswarth Abhilash Dara, **Yiu-Chang Lin**, "YODA System for WMT16 Shared Task: Bilingual Document Alignment" (WMT 2016)
- [7] Xuezhe Ma\*, Nicolas R Fauceglia\*, **Yiu-Chang Lin**\*, Eduard Hovy, "CMU System for Entity Discovery and Linking at TAC-KBP 2016" (*TAC KBP 2016*)
- [8] Tim Finin, Dawn Lawrie, Paul McNamee, James Mayfield, Douglas Oard, Nanyun Peng, Ning Gao, **Yiu-Chang Lin**, Josh

MacLin, Tim Dowd, "HLTCOE Participation in TAC KBP 2015: Cold Start and TEDL" (*TAC KBP 2015*)

[9] Nicolas R Fauceglia, **Yiu-Chang Lin**, Xuezhe Ma, Eduard Hovy, "CMU System for Entity Discovery and Linking at TAC-KBP 2015" (*TAC KBP 2015*)

[10] Nicolas R Fauceglia, **Yiu-Chang Lin**, Xuezhe Ma, Eduard Hovy, "Word Sense Disambiguation via PropStore and OntoNotes for Event Mention Detection" (*3<sup>rd</sup> Workshop on Events: Definition, Detection, Coreference, and Representation, NAACL 2015*)

[11] Ching-Feng Yeh, **Yiu-Chang Lin**, Lin-Shan Lee, "Minimum Phone Error Model Training on Merged Acoustic Units for Transcribing Bilingual Code-Switched Speech" (*Chinese Spoken Language Processing, ISCSLP 2012*)