Maochen G.

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EDUCATION

M.S., Computer Science, **New York University**, NY, USA   (2010 to 2013)   **GPA: 3.80/4**

B.S., Electrical & Computer Engineer, **Donghua University**, Shanghai, China   (2005 to 2009)

PROFESSIONAL EXPERIENCE

Microsoft   Bellevue, WA USA 03/2017 – Current

• **Software Development Engineer II**

Knowledge graph (KG) team engineer which serves for Bing.com

Built enterprise KG based entity recognition and question answer pipeline.

Built joint learning LSTM + Attention based intention and entity recognizer with ~23.2% accuracy improvement for 8 entity types and 3 intention types.

Build ontology mapping from/to Schema.org.

Extending semantic linking for entities to multiple enrichment context support.

IBM Watson   Yorktown Heights, NY USA 03/2016 – 03/2017

• **Staff Software Engineering Researcher**

Lead a team to enhance the medical problem detection system.

Trained ensemble-model to detect the potential problem and built metrics evaluation system.

Convert raw NLP feature space to vector representation, chi-square feature selection for categorical variables.

Optimized patient problem list identification system with decision tree model.

Research Conv NN for Problem List Generation.

IPsoft Inc.   New York, USA 11/2013 – 03/2016

• **Lead NLP R&D Engineer**

Lead a team to build a complex Sentence Similarity computing system using word distributed representation.

Transition-based entity recognition and entity linking to freebase.

Developed noun recognition system with Bayesian graphical models, also a comparison CRFs model.

Feature engineering in dialog act recognizer with SVM model.

~30% accuracy improvement on original dialogue scripts for 82 related topics.

Developed rule based co-referencing recognizing in Semantic Role Understanding System.

Implemented CRFs Named Entity Tagger to AI Interactive system with word embedding.

Implemented an adapter layer for Stanford Parser to accept CoNLL-U format training data.

Developed and optimized IPsoft specific model for Stanford PCFG and shift-reduced Parser.

ByteConsulting Inc.   New York, USA 06/2013 – 09/2013

• **Application Developer**

Developed PhoneGap E-Market financial mobile application with REST-ful web service provider.

PUBLICATION

• Querying Enterprise Knowledge Graph with Natural Language (ISWC 2019)

  Junyi Chai, Yonggang Deng, Maochen Guan, Yujie He, Bing Li and Rui Yan

  in Proceedings of the CEUR Workshop 2019

• Word Substitution in Short Answer Extraction: A WordNet-based Approach (2016)
  Qingqing Cai, James Gung, Maochen Guan, Gerald Kurlandski and Adam Pease
  in Proceedings of the Eighth Global WordNet Conference, Verginica Barbu Mititelu, Corina Forascu, Christiane
  Fellbaum, Piek Vossen (eds), pp 66-73

PATENT

• Ontology Entity Type Detection from Tokenized Utterance	Microsoft	2019
• Training Utterance Generation for Knowledge Graph Based QA	Microsoft	2019
• Querying Knowledge Graph with Natural Language Input	Microsoft	2019

SKILLS

• Java, Python, C#.
• Natural Language Processing, Deep Learning.
• OO Design Pattern, Agile Development, TDD.
• Git, Subversion, Maven/Gradle, Jenkins.

INTERESTS

• Attention based models
• Word Embedding
• Recurrent/LSTM based NLP sequence prediction

GitHub

https://github.com/maochen