

# Zhongyuan ZHU

also known as Raphael Shu

## PERSONAL DATA

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PLACE AND DATE OF BIRTH: Shanghai, 2 Aug 1989  
ADDRESS: 807 Juneshion Takahashi, 1467-1 Futatsugi , Matsudo,  
Chiba pref., Japan  
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## RESEARCH INTEREST

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- Natural language processing
  - Machine translation
  - Conversational models

## WORK EXPERIENCE

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- Apr 2014 - present *Research & Development, Weblio Inc.*  
Concentrations in the work:
- Applying machine learning techniques to enhance existing products
  - Research on Machine Translation
- Outcomes:
- Spell correction based on statistical translation models (released at 2014)
  - Fast implementation of AlexNet for handwriting recognition (released at 2015)
  - A novel conversation engine based on model combination (released at 2015)
  - Neural machine translation models for Workshop on Asian Translation (WAT) 2015
  - Syntactic pre-ordering statistical machine translation models for Workshop on Asian Translation (WAT) 2014
- 2012 - 2013 *Teaching Assistant, Knowledge and Natural Language Processing, University of Tsukuba*  
Instructing students to work on NLP experiments.
- May – Aug 2012 *Google Summer of Code 2012 (Internship)*  
Mentor: Itamar Turner-Trauring  
The purpose of this internship is to improve an open-source network engine “Twisted”, which is maintained by Python Software Foundation (PSF). I worked with two Google engineers and a start-up founder in this project.  
Contributions:
- Code contribution to Twisted engine
  - Automatic code quality tracking for test-driven development

## EDUCATION

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- Apr 2012 – Mar 2014 *MEng in Computer Science, University of Tsukuba*  
Natural Language Processing Lab. (<http://www.nlp.mibel.cs.tsukuba.ac.jp>)  
Thesis: Statistical Machine Translation Models Utilizing Tree Combination  
Advisor: Prof. Mikio Yamamoto  
Grade: A+: 1/14, A: 11/14, B: 2/14
- Dec 2011 – Mar 2012 *Research Student in Computer Science, University of Tsukuba*  
Concentration: Statistical machine translation  
Advisor: Prof. Mikio Yamamoto
- Sep 2008 – Jul 2011 *BA in Japanese Language, Shanghai International Studies University*  
This is a 3-year minor degree programme for studying Japanese language together with major programme.  
Thesis: Research on keyword extraction for Japanese language  
GPA: 3.23
- Sep 2007 – Jul 2011 *BSc in Computer Science, East China University of Political Science and Law*  
Graduation project: User action analysis system based on Natural Language Processing  
GPA: 3.11

## PUBLICATIONS

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- Zhongyuan Zhu. (2015). Evaluating Neural Machine Translation in English-Japanese Task. In: Proceedings of the 2nd Workshop on Asian Translation, pp. 61-68.
- Zhongyuan Zhu. (2014). Weblio Pre-reordering Statistical Machine Translation System. In Proceedings of the 1st Workshop on Asian Translation.
- Zhongyuan Zhu, Masanori Taniguchi, Chenchen Ding and Mikio Yamamoto. (2014). A preordering method using head-restructured CFG parse tree for SMT. In: Proceedings of the 20th Annual Meeting of the Association for Natural Language Processing, pp. 594-597.
- Zhongyuan Zhu, Jun-ya Norimatsu, Toru Tanaka, Takashi Inui, and Mikio Yamamoto. (2013). TSUKU Statistical Machine Translation System for the NTCIR-10 PatentMT Task. In Proceedings of NTCIR-10.

## HONOURS / ACHIEVEMENTS

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- 2014 Workshop on Asian Translation 2014, Second prize in English-Japanese translation task. Invited presentation in University of Tokyo.
- 2010 China National IEEE Standard Micromouse Competition, First prize
- 2009 China National IEEE Standard Micromouse Competition, Second prize

## LANGUAGES

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- MANDARIN CHINESE: Mother tongue  
ENGLISH: Fluent (IELTS band score: 7.0)  
JAPANESE: Fluent  
SPANISH: Basic knowledge

## HIGHLIGHTED PERSONAL PROJECTS

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- deepy *Highly extensible deep learning framework based on Theano*  
<https://github.com/uaca/deepy/>