

Raphael SHU

PERSONAL DATA

OFFICIAL NAME OF CURRENT PASSPORT: Zhongyuan Zhu
PLACE AND DATE OF BIRTH: Shanghai, 2 Aug 1989
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RESEARCH INTEREST

- Natural language processing
 - Machine Translation
 - Natural Language Understanding
 - Conversation models

EDUCATION

- Apr 2016 - Present *PhD in The University of Tokyo*
Nakayama Lab. (<http://www.nlab.ci.i.u-tokyo.ac.jp>)
Advisor: Hideki Nakayama
- 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

WORK EXPERIENCE

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)
- Second place in 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

PUBLICATIONS

Raphael Shu, and Hideki Nakayama. "Single-Queue Decoding for Neural Machine Translation." arXiv preprint arXiv:1707.01830 (2017).

Raphael Shu and Hideki Nakayama. "Later-stage Minimum Bayes-Risk Decoding for Neural Machine Translation." arXiv preprint arXiv:1704.03169 (2017).

Raphael Shu and Hideki Nakayama. "An Empirical Study of Adequate Vision Span for Attention-Based Neural Machine Translation", ACL Workshop on Neural Machine Translation, 2017.

Laokulrat, N., Phan, S., Nishida, N., Shu, R., Ehara, Y., Okazaki, N., Miyao, Y. and Nakayama, H., 2016. Generating Video Description using Sequence-to-sequence Model with Temporal Attention. In COLING (pp. 44-52).

Raphael Shu, and Akiva Miura. "Residual stacking of rnns for neural machine translation." Proceedings of the 3rd Workshop on Asian Translation (WAT2016). 2016.

HONOURS / ACHIEVEMENTS

2014 Workshop on Asian Translation 2014, Second prize in English-Japanese translation task. Invited presentation.

2010 China National IEEE Standard Micromouse Competition, First prize

2009 China National IEEE Standard Micromouse Competition, Second prize

LANGUAGES

MANDARIN CHINESE: Mothertongue

ENGLISH: Fluent (IELTS band score: 7.0)

JAPANESE: Fluent