

Ananlada Chotimongkol

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OBJECTIVE

To obtain a fulltime research or development position in the fields related to human languages and information technologies.

- Areas of interest include: spoken dialog system, machine learning, speech recognition, speech synthesis, and natural language processing

EDUCATION

Carnegie Mellon University, Pittsburgh, PA

Ph.D. in Language and Information Technologies

December 2007

Thesis Topic: Learning the Structure of Task-Oriented Conversations from the Corpus of In-Domain Dialogs

Advisor: Alexander Rudnicky

- Developed a learning system that can extract domain-specific knowledge required to build a task-oriented dialog system from in-domain human-human conversations
- This domain knowledge consists of a list of tasks, sub-tasks, and concepts
- The learning system utilizes unsupervised learning approaches including concept word clustering, text segmentation and document clustering
- Some modifications were applied to these approaches to make them suitable for the characteristics of spoken dialogs

Carnegie Mellon University, Pittsburgh, PA

M.S. in Language Technologies

May 2001

GPA: 3.89/4.00

Thesis Topic: Improve Speech Recognizer Performance in a Dialog System Using N-best Hypotheses Reranking

- Developed a post-processing technique that predicts the most likely hypothesis in the n-best list using various types of features
- Use a linear regression model to combine acoustic features, syntactic features and semantic features

Chulalongkorn University, Bangkok, Thailand

B.E. in Computer Engineering (with First-Class Honors)

April 1998

GPA: 3.80/4.00 (the top 1st ranked GPA of the class)

Undergraduate Project: Automatic Thai OCR Error Correction (with a scholarship from National Science and Technology Development Agency, Thailand)

- Developed an algorithm that automatically and effectively corrects OCR errors
- The correction algorithm utilizes a modified edit distance, which reflects the characteristic of Thai OCR errors, and word statistics

RESEARCH EXPERIENCE

Vivísimo, a search engine company, Pittsburgh, PA

Language Technologies Consultant

February 2008

- Helped improve the quality of an enterprise search software for Thai language documents

Carnegie Mellon University – School of Computer Science, Pittsburgh, PA

Research Assistant

January 2000 – December 2006

- Improved the quality of a speech recognizer's language models in several domains
 - Trained a language model from a sub-set of in-domain data that is homogenous (as measured by perplexity) with the language used in the current version of a dialog system
 - Interpolated the in-domain language model with language models trained from larger and related corpora to increase language coverage
- Extended the use of language models to other dialog understanding applications such as participant's role detection and topic boundary detection in a meeting domain

AT&T Labs Research – Voice Enabled Services Research Lab, Florham Park, NJ

Summer Manager

June 2004 – August 2004

- Developed a new language understanding approach for a spoken dialog system based on semantic information

RESEARCH EXPERIENCE (Cont.)	National Electronics and Computer Technology Center – Software and Language Engineering Laboratory, Bangkok Thailand <i>A major research institute in the field of information technologies in Thailand</i> Research Assistant May 1998 – May 1999 - Improved the accuracy of the commercial Thai OCR software, ArnThai, by detecting incorrect words and suggesting a list of possible corrections - Researched on text analysis techniques for a Thai Text-to-Speech system and developed a text normalization module
COMPUTER SKILLS	Operating System: MS-Windows, UNIX, Linux Programming Languages: Perl, C, C++, JAVA, Visual Basic, Prolog, COBOL, Assembly Applications/Tools: MS-Office, MS-Project, VISIO, CMU Sphinx recognition engines, CMU Statistical Language Modeling Toolkit, XML editors, R, S-Plus
SELECTED PUBLICATIONS	Spoken dialog system - Gokhan Tur, Dilek Hakkani-Tür, Ananlada Chotimongkol, "Semi-Supervised Learning for Spoken Language Understanding Using Semantic Role Labeling", <i>In the proceedings of IEEE ASRU-2005</i>, Puerto Rico, November, 2005. - Dilek Hakkani-Tür, Gokhan Tur, Ananlada Chotimongkol, "Using Syntactic and Semantic Graphs for Call Classification" <i>In the proceedings of the Proceedings of the ACL Workshop on Feature Engineering for Machine Learning in NLP</i>, Ann Arbor, MI, June 2005. - Ananlada Chotimongkol and Alexander I. Rudnicky, "Automatic Concept Identification in Goal-Oriented Conversations", <i>In Proceedings of ICSLP 2002</i>, Denver, Colorado, 2002. - Ananlada Chotimongkol and Alexander I. Rudnicky, "N-best Speech Hypotheses Reordering Using Linear Regression", <i>In Proceedings of EuroSpeech 2001</i>, Aalborg, Denmark, September 2001. Technologies for Thai language - Ananlada Chotimongkol and Alan W. Black, "Statistically trained orthographic to sound Models for Thai", <i>In Proceedings of ICSLP 2000</i>, Beijing, China October 2000. - Thatsanee Charoenporn, Ananlada Chotimongkol, and Virach Sornlertlamvanich, "Automatic Romanization for Thai", <i>In Proceedings of the COCOSDA'99</i>, Taipei, Taiwan, May 1999. - Surapant Meknavin, Boonserm Kijsirikul, Ananlada Chotimongkol, and Cholwich Nuttee, "Combining Trigram and Winnow in Thai OCR Error Correction", <i>In Proceedings of COLING'98</i>, Montreal, Canada, August 1998.
HONORS	- A Small Software Contest award from National Electronics and Computer Technology Center, Thailand, December 1998 - A certificate and a gold medal for the highest GPA from H.R.H. crown Prince Maha Vajiralongkorn, 1996 academic year - Siam Cement Company scholarship, 1996 academic year
ACTIVITIES	- An organizer of Sphinx Lunch, a weekly meeting of professors, researchers, and students at Carnegie Mellon University who are interested in speech technology, 2000 - 2006 - Head of the administrative and information group in the project section of the Eleventh Engineering Academic Exhibition, Chulalongkorn University, 1996 - A voluntary staff in the mathematics camp for secondary school students from rural areas, Chulalongkorn University ,October 1994