

Ming-Lung Chen

TECHNICAL SKILLS

Coding Languages: Java > Python > C++ > C

EDUCATION

- Master of Science, **Computer Science**
University of Southern California (GPA: 3.51/4.0) December 2016
 - Bachelor of Science, **Computer Science and Information Engineering**
National Changhua University of Education, Taiwan. (GPA: 3.91/4.0) June 2010
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RELATED COURSES

Applied Natural Language Processing, Artificial Intelligence, Object-Oriented Programming, Advanced Algorithms, P2P Computing, Database Systems, Mobile Games

WORK EXPERIENCE

Research Assistant, NLP Lab, IIS, Academia Sinica, Taiwan. July 2013 - April 2014

- Drafted and coordinated a sentiment analysis application project—RESOLVE; helped subjects' emotion wording skills improve for 70%.
- Designed algorithm framework of differentiating nuance of emotion words with these verb-phrase based features; optimized algorithm to meet real-time processing needs; published 2 papers.

Research Assistant, National Chang-hua University of Education, Taiwan. July 2008 - June 2010

- Designed load-balancing algorithms running on heterogeneous cluster systems for large-scale supercomputing tasks; published paper on I-SPAN 2009 conference and Journal of Supercomputing.
 - Implemented MPI and OpenMP combined self-scheduling algorithm in C capable of smartly adjusting both inter- and intra-node computation load; achieved 35% performance improvements.
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PROJECTS AND TEAMWORK EXPERIENCE

Emotion Classification on Chinese Text

- Design an SVM emotion classification algorithm using morphological-and-phonetic combined n-gram features for Chinese affective texts; improve overall classification accuracy by 13%.
- Extracted n-gram features and annotated with pin-yin phonetic information, developed core SVM algorithm with Libsvm and analyzed experimental results. (Four-person group project for Applied NLP course.)

RESOLVE (Research funded by National Science Council, Taiwan)

- Built RESOLVE—the online affective thesaurus writing assistance system for ESL learners, including backend computation engine in Java and frontend server of user interface in php, MySQL and JavaScript.
- Surveyed emotion wording difficulties of ESL users, investigated relationship between verb-phrase and word usage, designed machine learning algorithm utilizing verb-phrase features in distinguishing similar emotion words, and coded algorithm with Java. (Three-person group project.) <http://resolve.iis.sinica.edu.tw/>

P2P-Based Instant Messenger

- Built an online conferencing Instant Messenger system allowing multi-user video calls based on P2P technology.
 - Created a reliable and scalable ring topology based network for IM system and implemented intra-network communication with Java socket programming. (Two-person project for P2P Computing course.)
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OTHER EXPERIENCE

- Earned an Embedded Systems Certificate by EE Department at University of Colorado, Boulder.
 - Experienced in Verilog FPGA Design, Digital TV H.264 Codecs, CPU Bus-encoding, Multicore Embedded System ISA design and 8085 Microprocessor.
 - Experienced in HTML, php, MySQL, JavaScript, JSON, XML and CSS.
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HONOR

- University Exchange Student Scholarship by Minister of Education at Taiwan Recipient, 2007 and 2011.
 - Study Abroad Scholarship by Minister of Education at Taiwan Recipient, 2015.
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FOREIGN LANGUAGES

Chinese Mandarin (Native Language), Taiwanese (Native Language), English (Fluent).