

Reinald Kim Amplayo

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EDUCATION

Yonsei University, Seoul, Korea

- M.A. in Library and Information Science Mar 2016 – present
 - Coursework: Artificial Intelligence, Search and Text Analytics, Web and Social Media Mining, Big Data and Structured Data Management, Social and Knowledge Graph Analysis, Analysis of Algorithms, and 7 more
 - Thesis: “*System of Contexts: Generative Models for Unsupervised Sense Disambiguation*”

Ateneo de Davao University, Davao City, Philippines

- Units in Computer Science and Mathematics Jun 2013 – Feb 2014
 - WPA: 97.2 / 100
- B.S. in Information Technology Jun 2009 – Mar 2013
 - Thesis: “*Automated Essay Grading using Reflective Random Indexing*”
 - Graduated magna cum laude.
 - WPA: 93.7 / 100 (ranked 1st among all graduates)

RESEARCH EXPERIENCE

Data Intelligence Laboratory, Yonsei University

- Visiting Researcher Jan 2017 – Present
- Projects
 - **Video Question and Highlighting** (project supported by Samsung Research)
Developed an algorithm to extract adjective-noun pairs from short texts and cluster these pairs based on aspect. The algorithm also groups the texts based on the aspect-sentiment distribution.
 - **Additional Contexts for Better NLP Models**
Extended neural methods to NLP problems such as text classification, text summarization, and inference to intelligently and efficiently insert additional contexts to supplement in the learning.
 - **Knowledge Base Expansion**
Expanded FrameNet, a frame-based knowledge base, by semantically conceptualizing the frame elements to include instances from Probase using probabilistic and neural methods.
- Principal Investigator: Prof. Seung-won Hwang

Text and Social Media Mining Laboratory, Yonsei University

- Research Assistant Jan 2016 – Present
- Projects
 - **Aspect-based Sentiment Analysis** (project supported by Social Science Korea)
Extended the state-of-the-art sentiment topic model to work better on short texts using multiple techniques. Also extended the said topic model to incorporate product description for better aspect extraction.
 - **Research Paper Novelty Detection** (project supported by Microsoft Research Asia)
Extracted graph-based features from entity-based citation networks to detect novelty of research paper. Applied as a content feature for the research paper citation prediction problem.
 - **General Sense Disambiguation** (project supported by Social Science Korea)
Extended the conventional LDA topic model to better automatically induce word senses by introducing a special kind of word pair and mitigating the problem on sense granularities.
- Principal Investigator: Prof. Min Song

PUBLICATIONS

JOURNALS

- [J4] R.K. Amplayo, H.J. Park, S.-w. Hwang, “Overcoming the Sparsity of Micro Reviews: A Generative Aspect Sentiment Model,” *IEEE Transactions on Knowledge and Data Engineering*, under review, 2018.
- [J3] R.K. Amplayo, S.I. Lee, M. Song, “Incorporating Product Description to Sentiment Topic Models for Improved Aspect Term Extraction,” *Information Sciences*, accepted, 2018.
- [J2] R.K. Amplayo, S.L. Hong, M. Song, “Network-based Approach to Detect Novelty of Scholarly Literature,” *Information Sciences*, accepted, 2018.
- [J1] R.K. Amplayo and M. Song, “An Adaptable Fine-grained Sentiment Analysis for Summarization of Multiple Short Online Reviews,” *Data & Knowledge Engineering*, accepted, 2017.

CONFERENCES

- [C11] R.K. Amplayo, S.-w. Hwang, M. Song, "Evaluating Research Paper Novelty Detection Models through Time and Impact," submitted to *COLING 2018*, Santa Fe, NM, 2018.
- [C10] R.K. Amplayo, J.H. Kim, S.A. Sung, S.-w. Hwang, "Cold-start Aware User and Product Attention for Sentiment Classification," submitted to *ACL 2018*, Melbourne, Australia, 2018.
- [C9] M.S. Cho, R.K. Amplayo, S.-w. Hwang, "Teaching Models the Operands to Learn Interpretable Answers for Question Answering on Tables," submitted to *IJCAI 2018*, Stockholm, Sweden, 2018.
- [C8] R.K. Amplayo, S.-w. Hwang, M. Song, "Modeling Latent Features in Sense Topic Models for Word Sense Induction," submitted to *IJCAI 2018*, Stockholm, Sweden, 2018.
- [C7] R.K. Amplayo, K.J. Lee, J.Y. Yeo, S.-w. Hwang, "Adding Domain-free Contexts through Translations for Sentence Classification," submitted to *IJCAI 2018*, Stockholm, Sweden, 2018.
- [C6] R.K. Amplayo, S.J. Lim, S.-w. Hwang, "Entity2Topic: Selective Entity Semantic Representation for Neural Abstractive Summarization," *NAACL 2018*, New Orleans, LA, 2018.
- [C5] J.Y. Yeo, G.B. Lee, G.Y. Wang, S.T. Choi, H.S. Cho, R.K. Amplayo, S.-w. Hwang, "Visual Choice of Plausible Alternatives: An Evaluation of Image-based Commonsense Causal Reasoning," *LREC 2018*, Miyazaki, Japan, 2018.
- [C4] R.K. Amplayo, S.-w. Hwang, "Aspect Sentiment Model for Micro Reviews," in *ICDM 2017*, New Orleans, LA, Nov 2017.
- [C3] R.K. Amplayo, M. Song, "Building Content-driven Entity Networks for Scarce Scientific Literature using Content Information," in *BioTxtM at COLING 2016*, Osaka, Japan, Dec 2016.
- [C2] R.K. Amplayo, J. Occidental, "Multi-level Classifier for the Detection of Insults in Social Media," in *PCSC 2015*, Tuguegarao, Philippines, Mar 2015.
- [C1] R.K. Amplayo, J. Occidental, "A Semantic Model for Evaluating Essays using Reflective Random Indexing," in *PCSC 2015*, Tuguegarao, Philippines, Mar 2015.

WORK EXPERIENCE

Ateneo de Davao University, Davao, Philippines

- Lecturer, Computer Science Department Apr 2013 – Oct 2014
 - Courses Taught: Competitive Programming, Data Structures and Algorithms, Discrete Structures, among others.

Webzenga Hosting Solutions

- C# .NET Software Engineer Nov 2012 – Jan 2013
 - Project: Academic Information System, Church Information System

Ingenuity, Davao, Philippines

- Django Software Engineer Intern Apr 2012 – Jun 2012
 - Project: Payroll System

CERTIFICATIONS

- Coursera Certificates 2014
Machine learning courses: statistical inference, practical machine learning, regression models, among others
Data science courses: computing for data analysis, exploratory data analysis, developing data products, among others
 Other courses: function programming in Scala, R programming, algorithmic thinking, among others
- Fundamental Information Technology Engineer, PhilNITS Foundation 2012
 Given to individuals who have basic fundamental knowledge and skills required to be an advanced IT human resource
 One of only 14 passers. Passed the exam before graduation.

AWARDS & SCHOLARSHIPS

- Korean Government Scholarship Program (KGSP) Award, NIIED 2015 – 2018
 One of the few selected students to study with full scholarship in Korea.
 Includes language training, tuition, and living expenses fee, among others.
- Computer Science Department Award, Ateneo de Davao University 2013
 For being the most outstanding computer science student in terms of both academic and extracurricular activities.
- Outstanding Thesis Award, Ateneo de Davao University 2013
 For outstanding scientific research on automated essay grading.
- Consistent Placer, ACM - International Collegiate Programming Competition 2012 - 2013
 6th place, ACM-ICPC Philippines 2012
 2nd place, ACM-ICPC Philippines 2013
- Consistent Champion, ICCF - Open Programming Competition 2012 - 2013
- Consistent Dean's Lister, Ateneo de Davao University 2009 – 2014

For attaining a GPA of at least 90/100.

**CAMPUS
ACTIVITIES**

Ateneo Programming Varsity, Ateneo de Davao University

- President 2011 – 2014
 - Trained members in data structures and algorithms for competitive programming

CS Student Executive Council – Programming Unit, Ateneo de Davao University

- Unit Lead 2011 – 2012
 - Lead the software development team in the realization of several projects.
 - Projects led include event registration system, voting and polls system, among others.

Ateneo Circle of Computer Studies Students, Ateneo de Davao University

- President 2010 – 2011
 - Organized events, technical workshops, and research forums for the students of Computer Science Department

LANGUAGES

- Cebuano: Native language.
- Filipino: Native language.
- English: Fluent. TOEIC 990 (highest), TOEFL 111.
- Korean: Fluent. TOPIK Level 6 (highest).
- Chinese: Basic.

SKILLS

Programming Languages: Python, Java, C, C++, C#, R, Scala, SQL

Libraries: Tensorflow, Theano, NLTK, scikit-learn, gensim, Mallet, Encog, Weka, Stanford CoreNLP

INTERESTS

Research, programming, meeting new friends.

[CV compiled on 2018-03-17]