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| CONTACT INFORMATION | <p><i>E-mail:</i> aldrianobaja.m@gmail.com <i>WWW:</i> https://justhalf.github.io</p> <p><i>GitHub:</i> http://github.com/justhalf</p> |
| RESEARCH INTERESTS | Natural language processing, Hypergraph-based Models, Combinatorics, Algorithm |
| WORK EXPERIENCE | <p>Senior Data Scientist</p> <p><i>Traveloka Pte. Ltd.</i>, Singapore Oct '19 - Present</p> <ul style="list-style-type: none"> Managing a chatbot product with an impact of \$1.8mio annually, responsible for both directing the technical aspects as well as communication with the business stakeholders Worked on an internal dataset creation, to further support machine learning environment in the company Team lead: Dr. Debaditya Goswami <p>Research Assistant</p> <p><i>Singapore University of Technology and Design (SUTD)</i>, Singapore Jul '15 - Jun '17</p> <ul style="list-style-type: none"> Exploring semantic representations using graphical models for structured prediction Supervising undergraduate student researchers in research projects Advisor: Asst. Prof. Lu Wei <p>Research Engineer</p> <p><i>Knorex Pte. Ltd.</i>, Singapore Jul '13 - Jun '15</p> <ul style="list-style-type: none"> Designed and performed experiments for text classification on news articles Implemented and extended existing method on concept extraction for key terms extraction Redesigned and optimized a system for efficient distributed computing Developed and maintained in-house tools for natural language processing |
| EDUCATION | <p>Carnegie Mellon University, Pittsburgh, PA Aug '17 - Aug '19</p> <p>Master of Language Technology, Language Technology Institute</p> <ul style="list-style-type: none"> Worked on LORELEI project under Prof. Teruko Mitamura and Prof. Eduard Hovy, focusing on recognizing events and their attributes from text in low-resource language Systematically tested several methods (heuristics and deep learning) to find the most contributing factors across 25 different languages <p>National University of Singapore, Singapore Jul '09 - Jul '13</p> <p>Undergraduate, School of Computing</p> <ul style="list-style-type: none"> Bachelor of Computing (Computer Science, First Class Honours) Recipient of Lijen Industrial Development Award (Second top student) Majoring in Computer Science with focus area on Computer Networks Taking the course under Turing (research) Program Minoring in mathematics |
| PUBLICATIONS | <p>Low-resource Cross-lingual Event Type Detection in Documents via Distant Supervision with Minimal Effort Aug '18</p> <p><u>Aldrian Obaja Muis</u>, Naoki Otani, Nidhi Vyas, Ruochen Xu, Yiming Yang, Teruko Mitamura, and Eduard Hovy. In Proceedings of the 27th International Conference on Computational Linguistics (COLING 2018). Long paper</p> <p>Labeling Gaps Between Words: Recognizing Overlapping Mentions with Mention Separators Sep '17</p> <p><u>Aldrian Obaja Muis</u> and Wei Lu In Proceedings of the 2017 Conference on Empirical Methods in Natural Language Processing (EMNLP 2017). Long paper. [Supplementary Material].</p> <p>MalwareTextDB: A Database for Annotated Malware Articles Aug '17</p> <p>Sweekiat Lim, <u>Aldrian Obaja Muis</u>, Wei Lu and Chen Hui Ong In Proceedings of the conference of the Association for Computational Linguistics (ACL 2017). Long paper. [New Dataset].</p> <p>Efficient Dependency-guided Named Entity Recognition Feb '17</p> <p>Zhanming Jie, <u>Aldrian Obaja Muis</u> and Wei Lu In Proceedings of the 2017 Conference on Artificial Intelligence (AAAI-17)</p> |

- Performed the theoretical complexity analysis of the model via combinatorial analysis

Learning to Recognize Discontiguous Entities

Nov '16

Aldrian Obaja Muis and Wei Lu

In Proceedings of the 2016 Conference on Empirical Methods in Natural Language Processing (EMNLP 2016). Long paper. [Supplementary Material]

- Includes some combinatorial analysis in the supplementary

Weak Semi-Markov CRFs for NP Chunking in Informal Text

Jun '16

Aldrian Obaja Muis and Wei Lu

In Proceedings of the 2016 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL 2016). Short paper

PROJECTS

Language Technology Institute, **Carnegie Mellon University**, Pittsburgh, PA

Hierarchical RNN for Diagnosis Code Prediction (Class Project)

Aug '17 - May '18

- Worked on a novel hierarchical recurrent neural network (RNN) model for hierarchical classification for diagnostic code prediction using MIMIC-III dataset
- Advisors: Graham Neubig and Matthew R. Gormley

Incorporating Emotions for Emoji Prediction (Class Project)

Jan '18 - May '18

- Proposed and worked on evaluating ways to incorporate emotion information to improve emoji prediction [workshop paper]
- Advisors: Eduard Hovy and Teruko Mitamura

Analyzing Microaggressions from Self-reported Accounts (Class Project)

Jan '18 - May '18

- Utilized standard machine learning models to analyze aspects of microaggressions
- Advisors: Yulia Tsvetkov and Alan W Black

School of Computing, **National University of Singapore**, Singapore

Final Year Project (Honours Project)

May '12 - Apr '13

- Evaluated an existing algorithm for domain specific Word Sense Disambiguation through comparison with other algorithms
- Advisor: Ng Hwee Tou

Web Project Developer for TEAMMATES

May '12 - Jun '12

- Evaluated existing code and improve testing time to 5 times faster by refactoring and recoding the whole testing phase in 6 weeks
- Migrated the application from a client-based Javascript website into server-based JSP website

Undergraduate Research Opportunity Program (UROP)

May '11 - Apr '12

- Implemented and evaluated existing algorithm on extracting data from the Web under different domain through extensive experiment
- Advisor: Stéphane Bressan

Undergraduate Student Researcher (USR)

May '10 - Dec '10

- Analyzed the quality of translation from English to Malay and English to Indonesian
- Adapted existing Malay word stemming program into Indonesian
- Studied the language differences between Malay and Indonesian
- Advisor: Prof. Ng Hwee Tou

CO-CURRICULAR ACTIVITIES

NUSSU commIT (formerly known as NUSSU CBLC until Jun '11)

Head of Technical Cell

Jul '12 - Jun '13

Assistant Head of Technical Cell

Jul '10 - Jun '12

Member of Technical Cell

Aug '09 - Jun '10

- Maintained 100+ computers in the computer clusters in NUS through general cleanup, backup, and automated updates
- Developed public and internal website of NUSSU commIT for intensive daily usage

Technical Head of NUSSU CBLC IT Flair 2010

Feb '10 - Apr '10

- IT Flair is a combination between IT Fair and Flea market
- Developed website as publication media for the event and for selling second-hand items

Vice Project Director of NUSSU CBLC Cyberia Camp 2010

Oct '10 - Dec '10

- Cyberia Camp is a 3-day camp for certified Adobe Photoshop and Illustrator Training
- Led a team of 14 people to successfully organized the camp and received overwhelming response and positive feedback

NUS ISCF (Indonesian Students' Christian Fellowship)

Executive Committee

Jul '11 - May '13

- Managed a weekly group meeting of around 40 students

ACADEMIC
EXPERIENCE

Language Technology Institute, **Carnegie Mellon University**, Pittsburgh, PA

Teaching Assistant (TA)

For 11-711: Algorithms for NLP

Aug '18 - Dec '18

- Delivered a lecture on Conditional Random Fields
- Conducted office hours and recitation sessions
- Instructors: [Yulia Tsvetkov](#), [Robert Frederking](#)

School of Computing, **National University of Singapore**, Singapore

Teaching Assistant (TA)

Class tutor for CS1231: Discrete Structures

Aug '12 - Nov '12

Laboratory TA for CS1020: Programming Methodology 2

Jan '12 - Apr '12

Laboratory TA for CS1020: Programming Methodology 2

Aug '11 - Nov '11

Laboratory TA for IT1006: MATLAB Programming

Jan '11 - Apr '11

- Conducted a mock exam to help students prepare for their final exams
- Delivered presentations in class of around 14 to 22 students every week during the term

AWARDS

Lijen Industrial Development Award

Jul '13

- Represents the second top student in the batch

Dean's List Recipient for 4 (four) semesters

Jul '09 - Dec '11

- Represents top 5% of the cohort in Jul '09, Jan '10, Jan '11, Jul '11

Scholarship from Indonesian Government to pursue tertiary education

Jul '09 - Jun '13

Bronze medal, International Mathematical Olympiad in Bremen, Germany

Jul '09

Bronze medal, International Mathematical Olympiad in Madrid, Spain

Jul '08

Absolute winner, National Mathematical Olympiad in Surabaya, Indonesia

Sep '07

Bronze medal, National Mathematical Olympiad in Semarang, Indonesia

Sep '06

Gold medal, National Mathematical Olympiad in Jakarta, Indonesia

Sep '05

SKILLS

Computer Programming:

- Java, Python, JavaScript, Perl, C/C++

Software Engineering:

- Designed and developed web and desktop applications

Information/Internet Technology:

- Maintained small to moderate size computer networks

Mathematics:

- Combinatorics, especially graph theory

HOBBIES AND
INTEREST

Music (playing piano and guitar, leading a youth choir in church), creative literature, reading books

LANGUAGES

Indonesian (mother tongue), English