

CONTACT INFORMATION	<p><i>E-mail:</i> <a href="mailto:aldrianobaja.m@gmail.com">aldrianobaja.m@gmail.com</a> <i>WWW:</i> <a href="https://justhalf.github.io">https://justhalf.github.io</a></p> <p><i>GitHub:</i> <a href="http://github.com/justhalf">http://github.com/justhalf</a></p>
RESEARCH INTERESTS	Natural language processing, Hypergraph-based Models, Combinatorics, Algorithm
WORK EXPERIENCE	<p><b>Data Scientist (Mechanism Design)</b></p> <p>A tech startup (stealth mode), Singapore <b>Jul '20 - Present</b></p> <ul style="list-style-type: none"> <li>Designing and developing the mechanism for the product that we are building from the game theoretic and statistical point of view</li> </ul> <p><b>Senior Data Scientist</b></p> <p><i>Traveloka Pte. Ltd.</i>, Singapore <b>Oct '19 - Jun '20</b></p> <ul style="list-style-type: none"> <li>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</li> <li>Worked on an internal dataset creation, to further support machine learning environment in the company</li> <li>Team lead: Dr. Debaditya Goswami</li> </ul> <p><b>Research Assistant</b></p> <p><i>Singapore University of Technology and Design (SUTD)</i>, Singapore <b>Jul '15 - Jun '17</b></p> <ul style="list-style-type: none"> <li>Exploring semantic representations using graphical models for structured prediction</li> <li>Supervising undergraduate student researchers in research projects</li> <li>Advisor: Asst. Prof. Lu Wei</li> </ul> <p><b>Research Engineer</b></p> <p><i>Knorex Pte. Ltd.</i>, Singapore <b>Jul '13 - Jun '15</b></p> <ul style="list-style-type: none"> <li>Designed and performed experiments for text classification on news articles</li> <li>Implemented and extended existing method on concept extraction for key terms extraction</li> <li>Redesigned and optimized a system for efficient distributed computing</li> <li>Developed and maintained in-house tools for natural language processing</li> </ul>
EDUCATION	<p><b>Carnegie Mellon University</b>, Pittsburgh, PA <b>Aug '17 - Aug '19</b></p> <p>Master of Language Technology, Language Technology Institute</p> <ul style="list-style-type: none"> <li>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</li> <li>Systematically tested several methods (heuristics and deep learning) to find the most contributing factors across 25 different languages</li> </ul> <p><b>National University of Singapore</b>, Singapore <b>Jul '09 - Jul '13</b></p> <p>Undergraduate, School of Computing</p> <ul style="list-style-type: none"> <li>Bachelor of Computing (Computer Science, First Class Honours)</li> <li>Recipient of Lijen Industrial Development Award (Second top student)</li> <li>Majoring in Computer Science with focus area on Computer Networks</li> <li>Taking the course under Turing (research) Program</li> <li>Minoring in mathematics</li> </ul>
PUBLICATIONS	<p><b>Low-resource Cross-lingual Event Type Detection in Documents via Distant Supervision with Minimal Effort</b> <b>Aug '18</b></p> <p><u>Aldrian Obaja Muis</u>, Naoki Otani, Nidhi Vyas, Ruochen Xu, Yiming Yang, Teruko Mitamura, and Eduard Hovy.</p> <p>In Proceedings of the 27th International Conference on Computational Linguistics (COLING 2018). Long paper</p> <p><b>Labeling Gaps Between Words: Recognizing Overlapping Mentions with Mention Separators</b> <b>Sep '17</b></p> <p><u>Aldrian Obaja Muis</u> and Wei Lu</p> <p>In Proceedings of the 2017 Conference on Empirical Methods in Natural Language Processing (EMNLP 2017). Long paper. [Supplementary Material].</p> <p><b>MalwareTextDB: A Database for Annotated Malware Articles</b> <b>Aug '17</b></p> <p>Sweekiat Lim, <u>Aldrian Obaja Muis</u>, Wei Lu and Chen Hui Ong</p>

In Proceedings of the conference of the Association for Computational Linguistics (**ACL 2017**). Long paper. [New Dataset].

**Efficient Dependency-guided Named Entity Recognition** Feb '17

Zhanming Jie, Aldrian Obaja Muis and Wei Lu

In Proceedings of the 2017 Conference on Artificial Intelligence (**AAAI-17**)

- 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

	<b>Technical Head of NUSSU CBLC IT Flair 2010</b> <ul style="list-style-type: none"> <li>IT Flair is a combination between IT Fair and Flea market</li> <li>Developed website as publication media for the event and for selling second-hand items</li> </ul>	<b>Feb '10 - Apr '10</b>
	<b>Vice Project Director of NUSSU CBLC Cyberia Camp 2010</b> <ul style="list-style-type: none"> <li>Cyberia Camp is a 3-day camp for certified Adobe Photoshop and Illustrator Training</li> <li>Led a team of 14 people to successfully organized the camp and received overwhelming response and positive feedback</li> </ul>	<b>Oct '10 - Dec '10</b>
	<b>NUS ISCF (Indonesian Students' Christian Fellowship)</b> <b>Executive Committee</b> <ul style="list-style-type: none"> <li>Managed a weekly group meeting of around 40 students</li> </ul>	<b>Jul '11 - May '13</b>
ACADEMIC EXPERIENCE	Language Technology Institute, <b>Carnegie Mellon University</b> , Pittsburgh, PA <i>Teaching Assistant (TA)</i> For 11-711: Algorithms for NLP <ul style="list-style-type: none"> <li>Delivered a lecture on Conditional Random Fields</li> <li>Conducted office hours and recitation sessions</li> <li>Instructors: <a href="#">Yulia Tsvetkov</a>, <a href="#">Robert Frederking</a></li> </ul>	<b>Aug '18 - Dec '18</b>
	School of Computing, <b>National University of Singapore</b> , Singapore <i>Teaching Assistant (TA)</i> Class tutor for CS1231: Discrete Structures Laboratory TA for CS1020: Programming Methodology 2 Laboratory TA for CS1020: Programming Methodology 2 Laboratory TA for IT1006: MATLAB Programming <ul style="list-style-type: none"> <li>Conducted a mock exam to help students prepare for their final exams</li> <li>Delivered presentations in class of around 14 to 22 students every week during the term</li> </ul>	<b>Aug '12 - Nov '12</b> <b>Jan '12 - Apr '12</b> <b>Aug '11 - Nov '11</b> <b>Jan '11 - Apr '11</b>
AWARDS	<b>Lijen Industrial Development Award</b> <ul style="list-style-type: none"> <li>Represents the second top student in the batch</li> </ul> <b>Dean's List Recipient</b> for 4 (four) semesters <ul style="list-style-type: none"> <li>Represents top 5% of the cohort in Jul '09, Jan '10, Jan '11, Jul '11</li> </ul> <b>Scholarship</b> from Indonesian Government to pursue tertiary education <b>Bronze medal</b> , International Mathematical Olympiad in Bremen, Germany <b>Bronze medal</b> , International Mathematical Olympiad in Madrid, Spain <b>Absolute winner</b> , National Mathematical Olympiad in Surabaya, Indonesia <b>Bronze medal</b> , National Mathematical Olympiad in Semarang, Indonesia <b>Gold medal</b> , National Mathematical Olympiad in Jakarta, Indonesia	<b>Jul '13</b> <b>Jul '09 - Dec '11</b> <b>Jul '09 - Jun '13</b> <b>Jul '09</b> <b>Jul '08</b> <b>Sep '07</b> <b>Sep '06</b> <b>Sep '05</b>
SKILLS	Computer Programming: <ul style="list-style-type: none"> <li>Java, Python, JavaScript, Perl, C/C++</li> </ul> Software Engineering: <ul style="list-style-type: none"> <li>Designed and developed web and desktop applications</li> </ul> Information/Internet Technology: <ul style="list-style-type: none"> <li>Maintained small to moderate size computer networks</li> </ul> Mathematics: <ul style="list-style-type: none"> <li>Combinatorics, especially graph theory</li> </ul>	
HOBBIES AND INTEREST	Music (playing piano and guitar, leading a youth choir in church), creative literature, reading books	
LANGUAGES	Indonesian (mother tongue), English	