

CONTACT INFORMATION	<i>E-mail:</i> aldrianobaja.m@gmail.com <i>GitHub:</i> http://github.com/justhalf	
RESEARCH INTERESTS	Natural language processing, Hypergraph-based Models, Combinatorics, Algorithm	
EDUCATION	Carnegie Mellon University , Pittsburgh, PA Aug '17 - Aug '19 Master of Language Technology, Language Technology Institute <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 	
	National University of Singapore , Singapore Jul '09 - Jul '13 Undergraduate, School of Computing <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 • Minor in mathematics 	
WORK EXPERIENCE	Research Assistant <i>Singapore University of Technology and Design (SUTD)</i> , Singapore Jul '15 - Jun '17 <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 	
	Research Engineer <i>Knorex Pte. Ltd.</i> , Singapore Jul '13 - Jun '15 <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 	
PUBLICATIONS	Low-resource Cross-lingual Event Type Detection in Documents via Distant Supervision with Minimal Effort Aug '18 Aldrian Obaja Muis, 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	
	Labeling Gaps Between Words: Recognizing Overlapping Mentions with Mention Separators Sep '17 Aldrian Obaja Muis and Wei Lu In Proceedings of the 2017 Conference on Empirical Methods in Natural Language Processing (EMNLP 2017). Long paper. [Supplementary Material].	
	MalwareTextDB: A Database for Annotated Malware Articles Aug '17 Sweeiat Lim, Aldrian Obaja Muis, Wei Lu and Chen Hui Ong 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) <ul style="list-style-type: none"> • 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] <ul style="list-style-type: none"> • 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
- Note: an extension of this project is under review in NAACL 2019

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	
	<i>Teaching Assistant (TA)</i>	
	For 11-711: Algorithms for NLP	Aug '18 - Dec '18
	<ul style="list-style-type: none"> 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	
	<i>Teaching Assistant (TA)</i>	
	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
	<ul style="list-style-type: none"> 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
	<ul style="list-style-type: none"> Represents the second top student in the batch 	
	Dean's List Recipient for 4 (four) semesters	Jul '09 - Dec '11
	<ul style="list-style-type: none"> 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
SKILLS	Bronze medal , National Mathematical Olympiad in Semarang, Indonesia	Sep '06
	Gold medal , National Mathematical Olympiad in Jakarta, Indonesia	Sep '05
	Computer Programming:	
	<ul style="list-style-type: none"> Java, Python, JavaScript, Perl, C/C++ 	
	Software Engineering:	
HOBBIES AND INTEREST	<ul style="list-style-type: none"> Designed and developed web and desktop applications 	
	Information/Internet Technology:	
	<ul style="list-style-type: none"> Maintained small to moderate size computer networks 	
	Mathematics:	
	<ul style="list-style-type: none"> Combinatorics, especially graph theory 	
LANGUAGES	Music (playing piano and guitar, leading a youth choir in church), creative literature, reading books	
	Indonesian (mother tongue), English	