

Fajri Koto

PHD CANDIDATE · NLP

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Education

The University of Melbourne

Melbourne, Australia

PH.D. IN COMPUTER SCIENCE

Jul. 2018 - PRESENT

- Research topic: Neural abstractive summarization
- Supervisor: Prof. Timothy Baldwin, and Dr. Jey Han Lau
- Required course: Statistical machine learning (Grade: H1)
- Awardee of Australia Awards Scholarship (AAS)

University of Indonesia

Depok, Indonesia

M.SC. IN COMPUTER SCIENCE

Feb. 2013 - Feb. 2014

- Graduated *Cum Laude* with CGPA **3.72** out of **4.00**
- Thesis: *A Comparative Study over Twitter Sentiment Analysis: Which Features are Good?*
- Supervisor: Dr. Mirna Adriani
- Courses: Information Retrieval, Data Mining, Image Processing, Machine Learning.
- Awardee of Fast-track DIKTI scholarship

University of Indonesia

Depok, Indonesia

B.SC. IN COMPUTER SCIENCE

Aug. 2019 - Feb. 2013

- Graduated *Cum Laude* with CGPA **3.77** out of **4.00**
- Thesis: *USB Protocol in Implementation of Keyboard Driver with Touch Sensor Using AVR ATxmega 256 A3BU*
- Supervisor: Dr. Bob Hardian

Nara Institute of Science and Technology (NAIST)

Nara, Japan

INTERNSHIP STUDENT (EXCHANGE)

Jun. 2013 - Aug. 2013

- Working on speech technology in Augmented Human Communication Lab, NAIST
- Supervisor: Dr. Sakriani Sakti, Dr. Graham Neubig, Prof Tomoki Toda, Prof Satoshi Nakamura

Publications

CONFERENCE

- 2019 Fajri Koto, Jey Han Lau, Timothy Baldwin, "Improved Document Modelling with Neural RST Parser". In the Proceedings of the 17th Australasian Language Technology Workshop (ALTA), Sydney, Australia, December 2019 (oral presentation).
- 2017 Fajri Koto, Gemala Y. Rahmaningtyas, "InSet Lexicon: Evaluation of a Word List for Indonesian Sentiment Analysis in Microblogs". IEEE in the 21st International Conference on Asian Language Processing (IALP), Singapore, December 2017 (oral presentation).
- 2016 Fajri Koto, "A Publicly Available Indonesian Corpora for Automatic Abstractive and Extractive Chat Summarization". In the Proceedings of the 10th International Conference on Language Resources and Evaluation (LREC), Portorož, Slovenia, 2016 (poster presentation).
- 2016 Fajri Koto, Sakriani Sakti, Graham Neubig, Tomoki Toda, Mirna Adriani, Satoshi Nakamura. "Automatic Detection of Memorable Spoken Quotes". In the 2016 Spring Meeting of the Acoustical Society of Japan, Yokohama, Japan, 2016.
- 2016 Fajri Koto, Omar Abdillah. "Automatic Detection of Memorable Spoken Quotes". Springer in the 12th International Conference on Computing and Information Technology (IC2IT), Thailand, July 2016 (oral presentation)
- 2015 Fajri Koto, and Mirna Adriani. "HBE: Hashtag-Based Emotion Lexicons for Twitter Sentiment Analysis". ACM in The 6th Forum for Information Retrieval (FIRE 2015), Gandhinagar, India, December 2015 (poster presentation).
- 2015 Fajri Koto, and Mirna Adriani. "A Comparative Study on Twitter Sentiment Analysis: Which Features are Good?". Springer in The 20th International Conference on Applications of Natural Language To Information Systems (NLDB 2015), Passau, Germany, June 2015 (poster presentation)

- 2015 Fajri Koto, and Mirna Adriani. "The Use of POS Sequence for Analyzing Sentence Pattern in Twitter Sentiment Analysis". IEEE in The 8th International Symposium on Mining and Web (MAW15), Gwangju, Korea (join with the 29th AINA Conference), March 2015 (oral presentation).
- 2015 Fajri Koto, Sakriani Sakti, Graham Neubig, Tomoki Toda, Mirna Adriani, Satoshi Nakamura. "A Study On Natural Expressive Speech: Automatic Memorable Spoken Quote Detection". Springer in The 6th International Workshop on Spoken Dialog Systems (IWSDS), Busan, Korea, January 2015 (oral presentation).
- 2014 Fajri Koto, Sakriani Sakti, Graham Neubig, Tomoki Toda, Mirna Adriani, Satoshi Nakamura. "The Use of Semantic and Acoustic Features for Open-Domain TED Talk Summarization". IEEE in The 6th Asia Pacific Signal and Information Processing Association (APSIPA). Siem Reap, Cambodia, December 2014 (poster presentation).
- 2014 Fajri Koto. "SMOTE-Out, SMOTE-Cosine, and Selected-SMOTE: An Enhancement Strategy to Handle Imbalance in Data Level". IEEE in The 6th International Conference on Advanced Computer Science and Information Systems (ICACSIS), Jakarta, Indonesia, October 2014 (oral presentation).
- 2014 Fajri Koto, Sakriani Sakti, Graham Neubig, Tomoki Toda, Mirna Adriani, Satoshi Nakamura. "Memorable Spoken Quote Corpora of TED Public Speaking". IEEE in The 17th Oriental COCODA Conference. Phuket, Thailand, September 2014 (oral presentation).

PATENT

- 2018 Gilang Kusuma Jati, Agus Kurniawan, Fajri. "Personal Safety Device And Operating Method Therefor". Patent KR WO/2018/124584-A1. Issued 7 May 2018.
- 2017 Agus Kurniawan, Fajri, Omar Abdillah. "Apparatus and Method for Sharing Personal Electronic - Data of Health". Patent US 2017/0177797-A1. Issued 22 Jun 2017.
- 2015 Yanuar Rachman, Omar Abdillah, Fajri. "Method and Apparatus for Displaying Summarized Data". Patent US 2016/0147397-A1. Issued 26 May 2016.

BOOK

- 2016 Agus Kurniawan, Fajri, Gilang Kusuma Jati. "Panduan Dasar Pemrograman Tizen". Published by Samsung Research Indonesia. Jakarta, 2016.

Reviewing Invitation

- 2018 NAACL (Secondary reviewer) for 1 submission
- 2017 Knowledge-Based System Elsevier Journal for 1 submission

Professional Experience

PT KMKLabs (EMTEK)

Jakarta, Indonesia

DATA SCIENTIST

Apr. 2016 - Oct. 2017

- Implemented spam detection system using Sklearn and Flask framework.
- Integrated Product/Video/Article Recommendation System in liputan6 (news portal) and vidio (video channel) to improve CTR.
- Partly contributed in Data Pipeline and Analysis using Airflow scheduler.
- Working environment: AWS, GCP, Python, Ruby, PHP.

Samsung R&D Institute Indonesia

Jakarta, Indonesia

SENIOR STAFF (RESEARCH ENGINEER)

Jun. 2014 - Apr. 2016

- Delivered 3 Patents (2 US, 1 WO) for Head Quarter in Seoul.
- Published works on summarization at IC2IT (IEEE) 2016 and LREC 2016.

PT Astra International

Jakarta, Indonesia

ANDROID DEVELOPER

Jun. 2012 - Aug. 2012

- Partly developed two internal mobile apps: Wall-E (service adviser application) and DEC (Delivery Excellent to Customer)

Faculty of Computer Science, University of Indonesia

Depok, Indonesia

TEACHING ASSISTANT

Jun. 2010 - Aug. 2013

- Statistic and Probability (Aug 2013 - Dec 2013) - Ika Alfina, M.Sc.
- Theory of Language and Automata (Feb 2013 - Jun 2013) - Dr. Dina Cahyati
- Statistic and Probability (Aug 2012 - Dec 2012) - Ika Alfina, M.Sc.
- Discrete Math 1 (Feb 2012 - Jun 2011) - Prof. Belawati H. Widjaja
- Database (Aug 2011 - Dec 2011) - Ika Alfina, M.Sc.
- Calculus 1 (Aug 2010 - Dec 2010) - Dr. Kasiyah Junus

Talks

NLP MeetUp, 4 Dec. 2019

Sydney, Australia

Improved Document Modelling with a Neural Discourse Parser.

BukaTalk, 13 Mar. 2018

Jakarta, Indonesia

A sharing session about Data Scientist Career.

Computer Festival, 30 Jul. 2017

Jakarta, Indonesia

An annual event held by Faculty of Computer Science, University of Indonesia. I was invited to teach machine learning for intermediate level.

Wrangle Conference, 9 Dec. 2016

Selangor, Malaysia

Invited as a speaker in a single-day, single-track industry event about the principles, practice, and application of Data Science across multiple data-rich industries.

Data Science Weekend (DSW), 3 Dec. 2016

Yogyakarta, Indonesia

Invited as a As a Trainer and Keynote Speaker, I delivered machine learning course in beginner and intermediate level for future data scientist. (<http://datascienceweekend.id/>).

Data Science Weekend (DSW) Roadshow, 12 Nov. 2016

Jakarta, Indonesia

A sharing session about how Data Scientist role can help KMK Labs on doing their business.)

Projects

Neural Discourse Parser (RST), 2019 - <https://github.com/fajri91/NeuralRST>

Implementing state of the art Neural Discourse Parser with Pytorch and achieve performance similar to the original paper.

Neural Sentiment Analysis over Indonesian Political Tweets, 2019 - PT. Next Policy

Crawling and predicting Twitter stream before-and-after the inauguration of the new Government Cabinet in 2019. Multi-classification over three polarity classes are conducted using LSTM and Fasttext embedding.

LinkedIn Crawler, 2016 - PT. Ekruit Teknologi Pasifik

A service that crawles employee and employer information from LinkedIn, implemented using Selenium and PostgreSQL.

Sotoy - Spam detection service, 2016 - PT. KMKLabs

A service that handles Indonesian spam texts in comment section of vidio.com and liputan6.com.

S-Green, 2015 - PT. Samsung R&D Institute Indonesia

Android application for recording utility usage during business travel.

Honors & Awards

INTERNATIONAL

2019 **Student travel bursary recipient**, 17th Australian Language Technology Workshop (ALTW)

Australia

2017 **Awardee**, Australia Awards Scholarship for PhD (from 5,300+ applicants)

Australia

2014 **Best session presenter**, International Conference on Advanced Computer Science and I.S.

Jakarta, Indonesia

2013 **Receiver**, JASSO Scholarship for Summer Internship in NAIST

Nara, Japan

DOMESTIC

2014	Cum Laude Award (Top 5) , Graduation of Master Degree in CS, University of Indonesia	<i>Depok, Indonesia</i>
2013	Cum Laude Award (Top 5) , Graduation of Bachelor Degree in CS, University of Indonesia	<i>Depok, Indonesia</i>
2012	Receiver , Fast Track DIKTI Scholarship for Bachelor and Master Degree	<i>Depok, Indonesia</i>
2008	7th Place , Senior High School Math Competition in West Sumatra Province (out of of 1,000+)	<i>Padang, Indonesia</i>
2006	Top 200 National , PASIAD - Junior High School Math Competition (out of 40,000+)	<i>Indonesia</i>
2006	Semi Finalist , Junior High School Physic Competition in West Sumatra Province	<i>Padang, Indonesia</i>

Skills

Programming	Python, Java, Ruby, C, C++, LaTeX
Deep Learning	Pytorch, Tensorflow, Keras
NLP	Expertise in Core NLP tasks
Collaboration	Git, JIRA, Pivotal Tracker, Pair Programming
Database	PostgreSQL, MySQL, Google Big Query, Redis
Software Engineer	Rails (Ruby), Flask (Python), Airflow, Vagrant, Test Driven Development
Cloud	Amazon Web Service, Google Cloud Platform
Language	Indonesia (native), Minangkabau (native), English
Certificates	Deep Learning Specialization – Coursera (deeplearning.ai)

Organization Experience

IYKRA and Data Science Indonesia

Jakarta, Indonesia

INDUSTRY EXPERT

Jan. 2017 - Mar. 2018

- Arranged curriculum of Data Science course together with other Industry Experts.
- Conducted teaching and training related to Machine Learning for Professional in Jakarta.

Student Representative Council, Faculty of Computer Science, UI

Depok, Indonesia

HEAD OF COMMISSION-I (PSDM)

Jan. 2012 - Dec. 2012

- Managed 8 people for 1 year with works involve recruitment, monitoring BEM Fasilkom, organizing internal outing days, conducting leadership training and seminars for students.

SALAM, UI

Depok, Indonesia

DEPUTY OF MASS MEDIA, MED-C

Jan. 2012 - Dec. 2012

- Handled monthly newspaper and weekly articles, mainly involve in organizing and designing the publication

Reference

- Prof. Timothy Baldwin** (tb@ldwin.net) : Ph.D. supervisor at The University of Melbourne
Dr. Jey Han Lau (jeyhan.lau@gmail.com) : Ph.D. supervisor at The University of Melbourne
Dr. Mirna Adriani (mirna@cs.ui.ac.id) : M.Sc. supervisor at University of Indonesia