

Kemal Maulana Kurniawan

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EDUCATION

MSc, Artificial Intelligence

University of Edinburgh, Edinburgh, United Kingdom, 2017

- Thesis: *Exploring Recurrent Neural Network Grammars for Parsing Low-Resource Languages*. Supervised by [Frank Keller](#).
- Graduated with Distinction.
- Courses taken include machine learning and pattern recognition, probabilistic modeling and reasoning, and natural language understanding.

S.Kom., Computer Science (Bachelor's degree)

Universitas Indonesia, Depok, Indonesia, 2015

- Thesis: *Off-Topic Post Detection in Discussion Forums with Anomalous Text Detection Method*. Supervised by [Hisar Maruli Manurung](#).
- Graduated *cum laude* with CGPA of 3.87 (highest is 4).
- Participated in ACM-ICPC Asia-Jakarta 2010 and 2012, Asia-Kuala Lumpur 2011, and Asia-Hanoi 2012.
- Courses taken include linear algebra, statistics and probability, numerical analysis, and natural language processing.

RESEARCH

Young Scientist Exchange Program

2013 - 2014

Tokyo Institute of Technology, Tokyo, Japan

- Final report: *Predicting Within- and Inter-community Links in Networks*. Supervised by [Tsuyoshi Murata](#).
- Presented the work in the 102nd conference of The Japanese Society for Artificial Intelligence.
- Wrote link prediction module for [NetworkX](#), a Python library for manipulating and analyzing networks and graphs.

Junior Research Assistant, Intern

2013

National University of Singapore, Singapore

- Assisted a research in statistical machine translation under supervision of [Ng Hwee Tou](#) from NUS School of Computing.
- Implemented English-to-Chinese translation system prototype using Moses package based on the existing Chinese-to-English translation system.

EMPLOYMENT

Research Scientist

Oct 2017 - present

PT YesBoss Group Indonesia (Kata.ai), Jakarta, Indonesia

- Experimented on out-of-vocabulary (OOV) handling for Indonesian entity recognition on conversational texts. Achieved a model having roughly 80% micro-averaged F_1 score, even when OOV rate is more than 90%.
- Implemented the entity recognition model as a service for production using [PyTorch](#).

Teaching Assistant

Feb 2016 - Jun 2016

Faculty of Computer Science, Universitas Indonesia, Depok, Indonesia

- Led the teaching assistant team for Functional Programming course and prepared materials for the bi-weekly tutorials.
- Prepared project assignment materials and assisted students in weekly tutorials for Advanced Programming course.

- Conducted tutorials for Statistics and Probability course.

Software Engineer Apr 2015 - Jan 2016
PT Dwi Cermat Indonesia (Cermati), Jakarta, Indonesia

- Implemented auto-generation of minified CSS and JavaScript, auto-revert of broken build, and auto-tagging of successful build in production branch using Gulp and Travis CI.
- Implemented Slack webhook integration for error logs, Ansible deployment logs, and Fail2Ban logs.
- Wrote test fixtures creation module with Faker.js, reducing boilerplate code of setting up testing data.
- Implemented captcha and IP blocker with Fail2Ban to protect servers from malicious attacks.

Software Engineer Jan 2015 - Apr 2015
PT Rekan Usaha Mikro Anda (RUMA), Jakarta, Indonesia

- Added SMS notification services to existing RUMA agents web management system.
- Developed balance deduction penalty system for RUMA agents that are dormant for a certain period of time.
- Fixed a critical bug in existing implementation regarding transaction report and agent transfer.
- Developed a simple middleware implementing RESTful API to be used for RUMA's Android application.

Teaching Assistant 2011 - 2015
Faculty of Computer Science, Universitas Indonesia, Depok, Indonesia

- Was responsible for 15 - 20 students in Discrete Math, Linear Algebra, Statistics and Probability, and Data Structures and Algorithms courses.
- Conducted tutorials, assisted students in doing their assignments, and graded their works.

PRESENTATION

Introduction to AI and NLP 16 December 2017
Facebook Developer Circle Surabaya: Facebook Goes to Campus, Surabaya, Indonesia

Predicting Within- and Inter-community Links in Networks 24 July 2014
102nd conference of The Japanese Society for Artificial Intelligence, Osaka, Japan

PROJECTS

torchtext <https://github.com/pytorch/text>
Data loaders and abstractions for NLP using PyTorch. Contributed to this project by implementing a field class to contain characters of words. This field is essential to use character embedding with torchtext and PyTorch. Role: contributor.

pytorch-crf <https://github.com/kmkurn/pytorch-crf>
Conditional random field in PyTorch. I am the author of this project. Role: author.

id-nlp-resource <https://github.com/kmkurn/id-nlp-resource>
A list of Indonesian NLP resources. I gathered links to publicly available Indonesian NLP resources. As a low resource language, it can be hard to find NLP resources for Indonesian, which is why I created this repository. Role: author.

NetworkX <https://networkx.github.io>
A Python package for creation, manipulation, and study of networks and graphs.
Contributed to this project by writing the link prediction module. Role: contributor.

HONORS AND AWARDS	Indonesia Endowment Fund for Education Scholarship	2016
	2nd Runner-Up, Gemastik 5 Programming Competition (national-level)	2012
	4th Runner-Up, ITB Programming Contest (national-level)	2011

CERTIFICATION	Data Analysis and Statistical Inference by Duke University on Coursera	2015
	Statistical Learning by Stanford University on Stanford Online	2015

SKILLS	Natural languages	Indonesian, English, Japanese, Javanese
	Programming languages	Python, C++, JavaScript, Haskell, Java, LaTeX
	Operating Systems	macOS, Arch Linux, Ubuntu

LINKS	LinkedIn profile	http://id.linkedin.com/in/kemalmaulana
	Github profile	https://github.com/kmkurn
	Gitlab profile	https://gitlab.com/kmkurn
	Personal website	http://kkurniawan.com