Rezka Leonandya

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INDUSTRY EXPERIENCE

Senior Data Scientist, HappyFresh, Jakarta, Indonesia — Feb 2021 – Present

- Built machine learning model to predict out-of-stock items in a supplier store. Improved the relevant metrics by 3% - 5% in 18 stores (scaling on the way).
- Implemented next purchase recommendation models to predict which item users will reorder. Improved time-to-add-to-cart metrics by 20%.
- Helped improved synonym candidate generation using bayesian ranking model. This helped in reducing search null rate up to 2%.
- Helped immproved the search retrieval with an attribute match. This yielded more conversion rate up to 2 % and reduced the search null result up to 1 %.
- Worked as an end-to-end: understanding the products (define and prioritize requirements), data engineering (moving and transforming data), analytics (understanding the data, ab testing, inference), machine learning (building models) and deployment (writing production code, processing the prediction output).

Data Scientist, FinAccel, Jakarta, Indonesia — Feb 2020 – Feb 2021

- Led, built, and maintain email autoresponder and chatbot model to help customer service. Automatically resolved 53% incoming daily emails and 33% incoming daily chats.
- Designed and built the initial platform to semi-automatically train a machine learning model with batch data update.
- Built product recommendation system. Improved the batch prediction time by 8x with ANN. Worked with word embeddings, matrix factorization, and hybrid CF model.

Data Scientist Intern, ZyLAB, Amsterdam, The Netherlands — Jul 2017 – Oct 2017

- Implemented conditional random fields (CRF) model on Wikipedia dataset for named entity recognition for English, Dutch, and French languages. Work done under supervision of Prof. Johannes C. Scholtes, professor of text mining from University of Maastricht.

Backend and Data Engineer, CI Agriculture, Jakarta, Indonesia — Jun 2015 – Jul 2016

- Worked on creating data pipeline and API using java and python.

Data Scientist Intern, Bukalapak, Jakarta, Indonesia — Mar 2015 – May 2015

- Worked on analytics project.

RESEARCH EXPERIENCE

Kata Research Team, Kata.ai

- Research Scientist — Sep 2018 – Sep 2019
  - Project: Pretrained language models (ELMo, BERT, and ULMFiT) on unlabeled Indonesian conversational texts. Named entity recognition model with LSTM and pretrained LM.
  - Focus: Natural language processing, conversational texts, transfer learning, multitask learning.

i-machine-think Research Group, University of Amsterdam - Facebook AI Research Paris

- Graduate Research Student — Jan 2018 – Aug 2018
  - Project: Investigations on training neural networks to learn to follow instructions from small data, particularly in subregular language and language games of SHRDLURN. This project is a part of my master thesis.
  - Supervisors: Dr. Germán Kruszewski and Dieuwke Hupkes
  - Focus: Compositional semantics, online training, fast language mapping, and natural language processing.

Information Retrieval Lab, University of Indonesia

- Undergraduate Research Student — Jan 2015 – Jun 2015
  - Project: Worked on my undergraduate thesis in named entity recognition for Indonesian language.
  - Focus: Natural language processing, data mining, named entity recognition.

EDUCATION

Saarland University, Saarbruecken, Germany

- Ph.D in Computational Linguistics (Withdrawal, Unfinished) — Sep 2019 – Feb 2020
  - Worked on improving an A* parser for semantic parsing.

- Briefly explored self-supervised method (latent variable models and reinforcement learning) for AMR semantic parsing.
- Dropped out of the program due to family reasons.

University of Amsterdam, Amsterdam, The Netherlands

- M.Sc in Artificial Intelligence — Sep 2016 – Aug 2018
  - Thesis: Training neural networks to learn to follow instructions from small data
  - Worked in a joint research group between ILLC UvA Lab and Facebook AI Research Paris.
  - Cumulative GPA: 7.7 / 10

University of Indonesia, Jakarta, Indonesia

- B.S. in Computer Science — Aug 2011 – Aug 2015
  - Undergraduate Thesis: A semi-supervised approach for Indonesian named entity recoginition
  - Cumulative GPA: 3.22 / 4.00

PUBLICATIONS

CONFERENCES

[1] R. Leonandya, D. Hupkes, E. Bruni, and G. Kruszewski, "Training neural networks to learn to follow instructions from small data" in *Proceedings of the 13th International Conference on Computational Semantics (IWCS 2019)*. Gothenburg, Sweden, May 2019.

[2] R. Leonandya, F. Ikhwantri, "Pretrained language model transfer on neural named entity recognition in Indonesian conversational texts" in *The 33rd Pacific Asia Conference on Language, Information and Computation (PACLIC 33)*. Hakodate, Japan, Sep 2019.

[3] R. Leonandya, B.D. Trisedya, and N.H. Praptono, "A semi-supervised algorithm for Indonesian named entity recognition" in *Proceedings of the 3rd International Symposium on Computational and Business Intelligence*. Bali, Indonesia, Dec 2015.

EXPERTISE & INTEREST

Natural Language Processing, Machine Learning, Data Science, Statistics, Bayesian Inference, Deep Learning, Self-Supervised Learning, Reinforcement Learning, Competitive Programming, Algorithms and Data Structure .

TECHNOLOGY

Python, PyTorch, Tensorflow, Google Cloud Platform, Amazon Web Service, Jupyter Notebook, Java, C#, Linux, Matlab, R .

AWARDS & SCHOLARSHIPS

- Indonesia Endowment Fund for Higher Education — 2016 – 2018
  Full scholarship for Master's Education, covering living expenses and tuition fees

LANGUAGES

Indonesian (native), English (professional), German (basic).

[*CV compiled on 2022-01-27 for job purpose*]