

Rizal Fathony

Curriculum Vitae

✉ rizal@fathony.id
🌐 <https://rizal.fathony.id>

Work Experience

- 2021–Present **Lead Data Scientist**
Grab | Indonesia
- 2019 – 2021 **Post-Doctoral Researcher**
Bosch Center for Artificial Intelligence (BCAI), and
Carnegie Mellon University (CMU)
Hosted by: Prof. Zico Kolter | Pittsburgh, Pennsylvania, USA
- 2012 – 2019 **Research Assistant and Teaching Assistant**
University of Illinois at Chicago | Chicago, Illinois, USA
- May–Aug '17 **Research Intern**
Technicolor Research AI Lab | Los Altos, California, USA
- 2009 – 2012 **Data Dissemination and Visualization Developer (Software Engineer)**
Central Bureau of Statistics Indonesia | Jakarta, Indonesia
- 2007 – 2009 **Data Processing Supervisor (Data Engineer)**
Central Bureau of Statistics Indonesia Riau Province | Riau, Indonesia

Education

- 2014 – 2019 **PhD, Computer Science**, University of Illinois at Chicago, Chicago, Illinois, USA.
Advised by: Prof. Brian D. Ziebart.
Thesis: “Performance-Aligned Learning Algorithms with Statistical Guarantees”.
- 2012 – 2014 **MS, Computer Science**, University of Illinois at Chicago, Chicago, Illinois, USA.
- 2003 – 2007 **BS, Statistical Computing**, Institute of Statistics, Jakarta, Indonesia.

Selected Publications

Note: asterisks*: equal contributions; diamonds◊: alphabetically ordered authors (by last name)

- Top ML **Multiplicative Filter Networks**
Conferences: International Conference on Learning Representations (ICLR) 2021
Rizal Fathony*◊, Anit Kumar Sahu*◊, Devin Wilmott*◊, J. Zico Kolter
- AP-Perf: Incorporating Generic Performance Metrics in Differentiable Learning**
International Conference on Artificial Intelligence and Statistics (AISTATS) 2020
Rizal Fathony, Zico Kolter
- Fairness for Robust Log Loss Classification**
AAAI Conference on Artificial Intelligence (AAAI) 2020
Ashkan Rezaei*, Rizal Fathony*, Omid Memarrast, Brian D. Ziebart
- Distributionally Robust Graphical Models**
Advances in Neural Information Processing Systems (NeurIPS) 2018
Rizal Fathony, Ashkan Rezaei, Mohammad Bashiri, Xinhua Zhang, Brian D. Ziebart

Efficient and Consistent Adversarial Bipartite Matching

International Conference on Machine Learning (ICML) 2018

Rizal Fathony*, Sima Behpour*, Xinhua Zhang, Brian D. Ziebart

Adversarial Surrogate Losses for Ordinal Regression

Advances in Neural Information Processing Systems (NeurIPS) 2017

Rizal Fathony, Mohammad Bashiri, Brian D. Ziebart

Adversarial Multiclass Classification: A Risk Minimization Perspective

Advances in Neural Information Processing Systems (NeurIPS) 2016

Rizal Fathony, Anqi Liu, Kaiser Asif, Brian D. Ziebart

Invited Talks

2021 **Statistics vs Machine Learning**

Polytechnics of Statistics STIS (Jakarta, Indonesia)

2020 **Goal-Oriented Learning**

Pennsylvania State University (State College, Pennsylvania, USA);

2019 **Designing Performance-aligned Learning Algorithms using Distributionally Robust Principle**

INFORMS Annual Meeting 2019 (Seattle, Washington, USA)

2018 **Performance-Aligned Learning Algorithms with Statistical Guarantees**

Carnegie Mellon University (Pittsburgh, Pennsylvania, USA)

Community Services

Role: Program Committee Member or Reviewer for Leading Conferences

NeurIPS 2021, ICML 2021, AAAI 2021, NeurIPS 2020, AAAI 2020, NeurIPS 2019,

ICML 2019, PAKDD 2019, AISTATS 2019, AAAI 2019,

NeurIPS 2018, ICPR 2018, NeurIPS 2016

Honors and Awards

2018 Top 30% Highest-Scoring Reviewers for NeurIPS 2018 Conference.

2016 – 2018 NeurIPS Conference Travel Award 2016, 2017, and 2018 (USD 600, USD 800, and USD 1,000).

2012 – 2014 **International Fulbright Master of Science and Technology Scholarship Award**,
from the U.S. Department of State, Bureau of Educational and Cultural Affairs.

2010 Runner Up Developer at Indonesia Open Source Festival (Android Applications Competition), Bandung.

2009 Nominee of Research and Development Category at Asia Pacific Information and Communication
Technology Award (APICTA), Melbourne, Australia.

2009 Best Research and Development Category at Indonesia Information and Communication Technology
Award (INAICTA), Jakarta, Indonesia.

Skills and Experience

Programming Scientific: Python, Julia, MATLAB, R, SPSS, SAS

Language General: C#, Java, C, C++, JavaScript, Visual Basic, PHP

Data: SQL, LINQ, dplyr, SPSS macros, VBA macros, CPro (Census Processing)

ML & DS ML (Python): PyTorch, Scikit-Learn, JAX, TensorFlow, NumPy, SciPy, Pandas, CVXPY, Numba

Tools ML (Julia): FluxML, KNet, MLJ, DataFrames.jl, Query.jl, JuMP Optimization, Convex.jl

Database: PostgreSQL, SQL Server, MySQL, SQLite, MongoDB

Visualization: Plot: Matplotlib, Plots.jl; ggplot, Map: ArcGIS, QGIS, PostGIS, OpenLayers