Dr. Kristina P. Sinaga | Machine Learning Researcher & Data Scientist

– Indonesia

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○ Kristinap09

Professional Summary

Ph.D. in Applied Mathematics with **7+ years** of experience in **machine learning**, **federated learning**, and **multi-view clustering**. Expert in privacy-preserving AI with **2,800+ citations**, h-index of **7**, and publications in top-tier journals (IEEE TPAMI, IEEE Access). Proven track record of developing innovative algorithms, leading research projects, and contributing to open-source software.

Education

Chung Yuan Christian University   **Taiwan**
Ph.D. in Applied Mathematics   *2016–2020*
Dissertation: Multi-view Fuzzy Clustering Algorithms for Multi-View Data
6 journal publications during studies, **2,800+ citations**

University of Sumatera Utara   **Indonesia**
M.Sc. in Mathematics   *2013–2015*
Thesis: Stochastic Optimization Models for Emergency Service Location Problems

University of Sumatera Utara   **Indonesia**
B.Sc. in Mathematics   *2008–2013*
Graduated with high honors

Professional Experience

ISTI-CNR   **Italy**
Postdoctoral Researcher   *Oct 2024–September 2025*
- Developing novel clustering algorithms achieving **20-30% improvement** in accuracy
- Authoring **3+ papers** in federated unsupervised machine learning (in progress)
- Peer reviewer for IEEE Access, multiple MDPI and Elsevier journals

Chung Yuan Christian University   **Taiwan**
Postdoctoral Fellow   *Mar 2023–Mar 2024*
- Developed breakthrough clustering algorithms published in **IEEE TPAMI** (IF: **24.3**)
- Created federated and non-federated multi-view clustering frameworks
- Advanced theoretical foundations of privacy-preserving machine learning

Bina Nusantara University   **Indonesia**
Assistant Professor (Lecturer Specialist S3)   *Nov 2020–Mar 2022*
- Taught Mathematics and Data Analysis to **200+ students**
- Achieved **35% increase** in student engagement and **90%+ completion** rates
- Supervised **10+ student** research projects

Key Publications & Impact

Metrics: **2,950+ Citations** | h-index: **7** | **15+ Journal Articles** | IEEE, Elsevier, MDPI
Recent: Federated Multi-View K-Means Clustering, *IEEE TPAMI*, 2025 (IF: **24.3**)
Popular: Unsupervised k-means clustering algorithm, *IEEE Access*, 2020 (**2,450+ citations**)
Notable: Feature-reduction multi-view k-means clustering, *IEEE Access*, 2019 (**140+ citations**)

Technical Skills

Programming: Python, R, MATLAB, and LaTeX
ML/AI Frameworks: TensorFlow, PyTorch, scikit-learn, Keras, NumPy, Pandas
Specializations: Federated Learning, Multi-View Clustering, Privacy-Preserving ML, Statistical Modeling

Open Source Contributions

PyPI Packages: **mvkm-ed 1.1.0:** Multi-View Clustering Framework with federated learning capabilities
gcomvkm 0.1.0: Collaborative Multi-View Clustering with entropy regularization

Awards & Recognition

MDPI Publishers
Mathematics Exceptional Reviewers List   *2025*

Phi Tau Phi Scholastic Honor Society   **Taiwan**
Honorary Member   *2020*

Japan Science and Technology Agency   **Japan**
JST Scholarship   *2018*

Chung Yuan Christian University   **Taiwan**
International Student Scholarship   *2016*

Certifications

Stanford University & **DeepLearning.AI**   **Coursera**
Machine Learning Specialization   *2022*

DeepLearning.AI   **Coursera**
TensorFlow Developer Specialization   *2022*