ALI ZINDARI

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RESEARCH INTERESTS

Machine Learning: Learning Theory
Mathematics: Optimization, Theory of Deep Learning

EDUCATION

M.Sc. in Mathematics & Computer Science   *2023 - 2025*
Saarland University   Saarbrücken, Germany
Thesis: Fine-Grained Analysis of Local SGD under Intermittent Communication.

B.Sc. in Computer Engineering   *2017 - 2022*
Isfahan University of Technology   Isfahan, Iran
Thesis: Segmentation of Lungs COVID Infected Regions by Attention Mechanism and Synthetic Data.

Diploma in Mathematics and Physics   *2013 - 2017*
National Organization for Development of Exceptional Talents (Ejei 2)   Isfahan, Iran

PUBLICATIONS

Revisiting Consensus Error: A Fine-grained Analysis of Local SGD under Second-order Data Heterogeneity
K.K.Patel, A.Zindari, S.U.Stich, L.Wang   **[NeurIPS 2025]**
[Link Coming Soon]

Decoupled SGDA for Games with Intermittent Strategy Communication
A.Zindari*, P.Yazdkhasti*, A.Rodomanov, T.Chavdarova, S.U.Stich   **[ICML 2025]**
[Link]

The Limits and Potentials of Local SGD for Distributed Heterogeneous Learning with Intermittent Communication
K.K.Patel, M.Glasgow, A.Zindari, L.Wang, S.U.Stich, Z.Cheng, N.Joshi, N.Srebro **[COLT 2024]**
[Link]

On the Convergence of Local SGD Under Third-Order Smoothness and Hessian Similarity
A.Zindari, R.Luo, S.U.Stich   **[Opt4ML @ NeurIPS 2023]**
[Link]

Segmentation of Lungs COVID Infected Regions by Attention Mechanism and Synthetic Generated Data
A.Zindari*, P.Yazdkhasti*, Z.Nabizadeh, P.Khadivi, N.Karimi, S.Samavi   **[Arxiv 2021]**
[Link]

Bifurcated Autoencoder for Segmentation of COVID-19 Infected Regions in CT Image
P.Yazdkhasti*, A.Zindari*, Z.Nabizadeh, R.Roshandel, P.Khadivi, N.Karimi, S.Samavi **[ICPR 2021 Workshops]**

* Equal Contribution

RESEARCH EXPERIENCES

CISPA Helmholtz Center for Information Security - MLO Lab   Oct. 2022 - Present
Supervisors*: Prof. Sebastian U. Stich - Prof. Tatjana Chavdarova*   *Saarbrücken, Germany*

· Worked on theory of distributed optimization and minimax games.

École polytechnique fédérale de Lausanne (EPFL) - LIONS Lab   Jun. 2022 - Oct. 2022
Supervisors*: Prof. Ali Ramezani-Kebrya - Prof. Reza Shokri (NUS)*   *Lausanne, Switzerland*

· Worked on the adversarial robustness of self-supervised models.

École polytechnique fédérale de Lausanne (EPFL) - VITA Lab   Jul. 2021 - Oct. 2021
Supervisors*: Prof. Alexandre Alahi - Yuejiang Liu - Mohammadhossein Bahari*   *Lausanne, Switzerland*

· Worked on the Motion Forecasting problem for self-driving cars.

Isfahan University of Technology - Biomedical Imaging Lab   Jun. 2020 - Feb. 2021
Supervisors*: Prof. Shadrokh Samavi - Prof. Nader Karimi*   *Isfahan, Iran*

· Proposed a bifurcated neural network for segmentation of COVID-19 infected regions in CT images.