

# TRI NGUYEN

nguyetr9@oregonstate.edu  $\diamond$  [github.com/ductri](https://github.com/ductri)  $\diamond$  541 360 9255

## EDUCATION

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**Ph.D. in Computer Science**, Oregon State University — Corvallis, OR, US 2020 - Expected 2025

GPA: 3.85/4

Relevant courses: Convex Optimization, Matrix Analysis, NLP with Deep Learning, Reinforcement Learning, Statistical Learning, ML.

**Bachelor of Computer Science**, Ho Chi Minh City University of Technology — Vietnam 2012 - 2017

Gifted program.

GPA: 8.72/10 (Top 10 in Computer Science and Electrical Engineering department).

## PUBLICATIONS

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- **T. Nguyen**, S. Ibrahim, and X. Fu. *Deep Clustering with Incomplete Noisy Pairwise Annotations: A Geometric Regularization Approach*. Proceedings of the 40th International Conference on Machine Learning (**ICML**), 2023.
  - Analyzed the MLE-based objective loss for training a classifier given noisy incomplete binary pairwise labels.
  - Achieved top accuracy on CIFAR10, STL10, Imagenet10 and outperformed the second best method by 10-20% by optimizing our proposed regularized loss function using the ResNet-50 as the backbone architecture.
- S. Ibrahim, **T. Nguyen**, and X. Fu. *Deep Learning From Crowdsourced Labels: Coupled Cross-Entropy Minimization, Identifiability, and Regularization*. Proceedings of the Twelfth International Conference on Learning Representations (**ICLR**), 2023.
  - Proposed and analyzed a regularized coupled cross entropy loss which improved 3% accuracy on average compared to baseline methods with noisy labels from noisy crowdsourced annotations.
- **T. Nguyen**, X. Fu, and R. Wu. *Memory-Efficient Convex Optimization for Self-Dictionary Separable Nonnegative Matrix Factorization: A Frank-Wolfe Approach*. Trans. Sig. Proc. 70 (2022), 3221–3236.
  - Proposed and analyzed the Frank-Wolfe algorithm in addressing the self-dictionary problem to offer a linear complexity in memory in contrast to the quadratic complexity of other baselines.

## RELATED EXPERIENCE

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### Graduate Research Assistant

Mar 2020 - Now

Prof. Xiao Fu, Oregon State University,

Corvallis, OR

- Performed research projects on topics including deep learning, identifiability on matrix/tensor decomposition, convex optimization, statistical learning, which results in 3 publications in top-tier conferences and journals.
- Presented one topic every quarter in internal reading group meetings, including: diffusion model, minimax analysis, causal inference, reinforcement learning.

### AI Engineer

Feb 2017 - Jan 2020

YouNet Group

Ho Chi Minh City, Vietnam

- Lower manual workload of social media research team from 65% to 40% by implementing an LSTM-based model to perform sentiment classification on Vietnamese text, and building a training pipeline on growing textual data.
- Reduced 100 support requests/week from the business analysis team by building a web-based retrieval application supporting highly customizable search syntax and offering advanced operators such as ‘not’, ‘and’, ‘or’, ‘\*’.
- Formulated an equation to determine reliable sample size essential for the business analysis team’s work.

## PROGRAMMING LANGUAGES

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- Programming languages: Python, Matlab, C++.
- Deep learning frameworks and relevant tools: Pytorch, Tensorflow, Git; Docker, Kubernetes; SQL, Pandas, Numpy; Tmux, Vim, Latex.