

# ABDULLA JASEM ALMANSOORI

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## RESEARCH SUMMARY

My research focuses on efficient collaborative learning via low-rank adaptation. I develop and analyze methods for personalized federated learning and distributed optimization, motivated by privacy and communication constraints, especially in healthcare and other sensitive, scarce data settings.

## EDUCATION

 <b>Mohamed bin Zayed University of AI (MBZUAI)</b>	Abu Dhabi, UAE
<i>PhD in Machine Learning (Supervisor: Martin Takáč &amp; Samuel Horváth)</i>	(Aug 2021 - Present)
 <b>University of Southern California (USC)</b>	Los Angeles, CA
<i>MS in Computer Science</i>	(Jan 2017 - Dec 2018)
 <b>Purdue University</b>	West Lafayette, IN
<i>BS in Industrial Engineering (with distinction)</i>	(Aug 2012 - May 2016)

## WORK EXPERIENCE

 <b>RIKEN – Center for Advanced Intelligence Project (AIP)</b>	Tokyo, Japan
<i>Research Intern (PI: Emtiyaz Khan &amp; Thomas Möllenhoff)</i>	(Aug 2025 - Feb 2026)
· Worked in the Adaptive Bayesian Intelligence team. Developed accelerated methods for variational learning that improved convergence and robustness relative to the lab baseline (IVON). Paper in progress.	
 <b>Meta – Monetization: Ranking and AI Foundations</b>	Sunnyvale, CA
<i>ML Engineer Intern (Mentor: Fan Xia)</i>	(May 2025 - Aug 2025)
· Built 20M+ sample training pipelines for ads ranking, trained 7B-parameter multimodal models, and distilled 1B-parameter models for production use, improving offline AUC vs. baseline.	
 <b>Sheikh Shakhbout Medical City (SSMC)</b>	Abu Dhabi, UAE
<i>Trainee (part-time) (Mentor: Siddiq Anwar)</i>	(Jan 2025 - Present)
· Leading a project on applying federated learning in healthcare for 30-day readmission prediction with collaboration across multiple hospitals in the UAE. IRB approved and data ready, study in progress.	
 <b>UAE National Service, Dubai Police</b>	(Feb 2021 - Jun 2022)
· Finished army boot camp. Worked as a security guard in Dubai International Airport and Al Maktoum International Airport and as a vehicle inspector in Expo 2020.	
 <b>New York University – Abu Dhabi (NYUAD)</b>	Abu Dhabi, UAE
<i>Research Assistant (PI: Kris Gunsalus)</i>	(Jan 2020 - Feb 2021)
· Worked in the Center of Genomics and Systems Biology with the core bioinformatics team. Supported next-generation sequencing workflows and AI-based bioinformatics pipelines.	

## PUBLICATIONS

### Preprint

1. *Beyond SGD, Without SVD: Proximal Subspace Iteration LoRA with Diagonal Fractional K-FAC.* (2026)  
**Abdulla Jasem Almansoori**, Maria Ivanova, Andrey Veprikov, Aleksandr Beznosikov, Samuel Horváth, and Martin Takáč. [arXiv preprint](#).

### Conference

1. *Collaborative and Efficient Personalization with Mixtures of Adaptors.* (2025)  
**Abdulla Jasem Almansoori**, Samuel Horváth, and Martin Takáč. Conference on Parsimony and Learning (CPAL).
2. *Byzantine-Tolerant Methods for Distributed Variational Inequalities.* (2023)  
Nazarii Tupitsa, **Abdulla Jasem Almansoori**, Yanlin Wu, Martin Takáč, Karthik Nandakumar, Samuel Horváth, Eduard Gorbunov. Neural Information Processing Systems (NeurIPS).

### Journal

1. *PaDPaF: Partial Disentanglement with Partially-Federated GANs.* (2024)  
**Abdulla Jasem Almansoori**, Samuel Horváth, and Martin Takáč. Transactions on Machine Learning Research (TMLR).
2. *Stochastic Gradient Methods with Preconditioned Updates.* (2024)  
Abdurakhmon Sadiev, Aleksandr Beznosikov, **Abdulla Jasem Almansoori**, Dmitry Kamzolov, Rachael Tappenden, and Martin Takáč. Journal of Optimization Theory and Applications (JOTA).

### Workshop

1. *Faster Than SVD, Smarter Than SGD: The OPLoRA Alternating Update.* (2025)  
**Abdulla Jasem Almansoori**, Maria Ivanova, Andrey Veprikov, Aleksandr Beznosikov, Samuel Horváth, and Martin Takáč. OPT 2025 Workshop.
2. *PaDPaF: Partial Disentanglement with Partially-Federated GANs.* (extended for TMLR) (2023)  
**Abdulla Jasem Almansoori**, Samuel Horváth, and Martin Takáč. FLSys 2023 Workshop (oral).

## ACADEMIC SERVICE

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- **Teaching Assistant, MBZUAI:** (i) ML701: Machine Learning (Fall 23, Fall 24), (ii) ML802: Advanced Topics in Machine Learning (Spring 24), (iii) ML814: Selected Topics in Machine Learning (Spring 25), (iv) ML8509: Collaborative Learning (Spring 26).
- **Reviewer:** (i) NeurIPS 2022-2025, (ii) ICML 2023-2026, (iii) ICLR 2023-2025, (iv) ICOMP 2024, (v) TMLR.

## ACHIEVEMENTS

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- **ICML Best Reviewer Award**, 2024.
- **MBZUAI Executive Program** Project Coordinator, 4th Cohort (2023).
  - Coordinated an AI strategy project for the government with executive-level participants.
- **Kawader Research Assistantship**, NYUAD, 2020.
- **Phi Beta Kappa Society**, Purdue University, 2016.
- **Distinguished Students Scholarship**, UAE Scholarships Office (SCO), 2012.
  - UAE's most prestigious academic scholarship.

## SKILLS

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<b>Programming Languages</b>	Python, C, JS, Haskell
<b>ML/Research</b>	PyTorch, Hugging Face, federated learning (flwr)
<b>Experimentation/Systems</b>	Hydra, Slurm, Docker, Git
<b>Languages</b>	Arabic (native), English (fluent), Japanese (intermediate), Italian (intermediate)

## REFEREES

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References available upon request.