

Amirhesam Abedsoltan

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📍 La Jolla, CA

PhD Student, University of California San Diego

🔗 Google Scholar

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SUMMARY OF QUALIFICATION

Expertise in Machine Learning and Statistical Learning:

- Strong theoretical foundation and practical experience in machine learning and statistical learning.
- Authored papers in top-tier conferences such as NeurIPS and ICML.
- Proficient in multi-GPU programming. Successfully developed and implemented a novel algorithm optimized for parallel GPU computation, ensuring maximum scalability.
- Extensive hands-on experience in training, tuning, and optimizing deep neural networks for various tasks, ensuring optimal performance and generalization. Demonstrated ability to troubleshoot and address complex technical challenges, including issues with convergence, overfitting, and regularization.

Collaboration and Leadership Abilities

- Demonstrated skill in collaborating with professionals from diverse backgrounds.
- Proven track record of leading and managing projects to successful completion.

Research Interests

Optimization, Machine Learning, Generalization, Scaling

EDUCATION

PhD in Computer Science , (Advisor: Misha Belkin) <i>University of California San Diego, La Jolla, CA</i>	2021—Present
Master of Science in Computer Science (GPA: 3.95/4.00) , <i>University of Southern California, Los Angeles, CA</i>	2018—2021
Bachelor of Science in Electrical Engineering , <i>Sharif University of Technology, Tehran, Iran</i>	2014—2018

PUBLICATION

- *On the Nystrom Approximation for Preconditioning in Kernel Machines*
Amirhesam Abedsoltan, Mikhail Belkin, Parthe Pandit, Luis Rademacher
27th International Conference on Artificial Intelligence and Statistics (**AISTATS**), 2024
- *On Emergence of Clean-Priority Learning in Early Stopped Neural Networks*
Chaoyue Liu*, **Amirhesam Abedsoltan***, Mikhail Belkin
In Submission, *Equal contribution
- *Towards Large Kernel Models*
Amirhesam Abedsoltan, Mikhail Belkin, Parthe Pandit
40th International Conference on Machine Learning (**ICML**), 2023
Open source code [GitHub](#)
- *Benign, Tempered, or Catastrophic: Toward a Refined Taxonomy of Overfitting*
Neil Mallinar, James B. Simon, **Amirhesam Abedsoltan**, Parthe Pandit, Mikhail Belkin, Preetum Nakkiran
36th Neural Information Processing Systems (**NeurIPS**), 2022

EXPERIENCE

Graduate Research Assitant <i>University of California San Diego (UCSD)</i>	Fall 2021-Present <i>La Jolla, CA</i>
Graduate Visiting Student <i>Simons Institute for the Theory of Computing (Host: Peter Bartlett)</i>	November 2023 <i>Berkeley, CA</i>
Summer Cluster: Deep Learning Theory <i>The Simons Institute for the Theory of Computing at the University of California Berkeley</i> https://simons.berkeley.edu/people/amirhesam-abedsoltan	Summer 2022 <i>Berkeley, CA</i>
Princeton Machine Learning Summer School <i>Princeton University</i> https://orfe.princeton.edu/news/2022/princeton-machine-learning-summer-school-2022	Summer 2022 <i>Princeton, NJ</i>

SKILLS

Related Courses	Real Analysis, Functional Analysis, Theory of Probability, Optimization, Random Process, Stochastic Processes, Machine Learning, Deep Learning, NLP, Artificial Intelligence, Bioinformatics
Languages and Tools	PYTHON, \LaTeX , Matlab, C, PyTorch, Tensorflow, Keras, Numpy, GitHub, Adobe Illustrator
Teaching assistant	Pattern Recognition, Random Process, Linear Algebra, Engineering Mathematics, Numerical Computation, Communication Systems

AWARDS

Graduate Research assistantship, UCSD	2021-Present
Graduate Annenberg fellowship from USC Viterbi School of Engineering	2018-2019
Undergrad full scholarship, Sharif University of technology	2014-2018
Top 0.01 in Nation Wide University Entrance Exam	2014
Member of NODET, National Organization for Development of Exceptional Talents	Fall 2010