Alon Peled-Cohen (Alon Cohen)

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Website: https://sites.google.com/site/aloncohentechnion/ (not up-to-date)
Research Interests: Machine Learning, Statistics, Online Learning, Convex and Non-Convex Optimization, Reinforcement Learning.

Education

Ben-Gurion University of the Negev, Beer-Sheva, Israel
B.Sc, Computer Science, 2012 (Summa Cum Laude)

Hebrew University, Jerusalem, Israel
M.Sc, Computer Science, 2014 (Summa Cum Laude)
Thesis: Surrogate Loss Minimization.
Advisors: Prof. Daphna Weinshall and Prof. Shai Shalev-Shwartz.

Technion, Haifa, Israel
Ph.D., Industrial Engineering and Management, 2019.
Thesis: Structure and Combinatorics in Online Learning.
Advisor: Prof. Tamir Hazan.
Awards: Daniel Scholarship, 2016-2017.

Publications

Shared computational principles for language processing in humans and deep language models
with Ariel Goldstein, Zaid Zada, Eliav Buchnik, Mariano Schain, Amy Price, Bobbi Aubrey, Samuel A Nastase, Amir Feder, Dotan Emanuel, Aren Jansen, Harshvardhan Gazula, Gina Choe, Aditi Rao, Catherine Kim, Colton Casto, Lora Fanda, Werner Doyle, Daniel Friedman, Patricia Dugan, Lucia Melloni, Roi Reichart, Sasha Devore, Adeen Flinker, Liat Hasenfratz, Omer Levy, Avinatan Hassidim, Michael Brenner, Yossi Matias, Kenneth A Norman, Orrin Devinsky, Uri Hasson.
Nature neuroscience, 2022.

Asynchronous Stochastic Optimization Robust to Arbitrary Delays
with Amit Daniely, Yoel Drori, Tomer Koren, Mariano Schain.
Conference on Neural Information Processing Systems, 2021.

Minimax regret for stochastic shortest path
with Yonatan Efroni, Aviv Rosenberg, Yishay Mansour.
Conference on Neural Information Processing Systems, 2021.

Online Markov Decision Processes with Aggregate Bandit Feedback
with Tomer Koren, Haim Kaplan, Yishay Mansour.
Conference on Learning Theory, 2021.

Apprenticeship Learning via Frank-Wolfe
with Tom Zahavy, Haim Kaplan, Yishay Mansour.
AAAI Conference on Artificial Intelligence, 2020.

Unknown mixing times in apprenticeship and reinforcement learning
with Tom Zahavy, Haim Kaplan, Yishay Mansour.
Conference on Uncertainty in Artificial Intelligence, 2020.

Near-optimal Regret Bounds for Stochastic Shortest Path
Alon Cohen, Haim Kaplan, Yishay Mansour, Aviv Rosenberg.
International Conference on Machine Learning, 2020.

Logarithmic regret for learning linear quadratic regulators efficiently
Asaf Cassel, Alon Cohen, Tomer Koren.
International Conference on Machine Learning, 2020.

Learning Linear-Quadratic Regulators Efficiently with only $\sqrt{T}$ Regret
with Tomer Koren, Yishay Mansour,
International Conference on Machine Learning, 2019.

Learning to Screen
with Avinatan Hassidim, Haim Kaplan, Yishay Mansour, Shay Moran,
Conference on Neural Information Processing Systems, 2019.

Planning and Learning with Stochastic Action Sets
with Craig Boutilier, Amit Daniely, Avinatan Hassidim, Yishay Mansour, Ofer Meshi,
Martin Mladenov and Dale Schuurmans,
International Joint Conferences on Artificial Intelligence, 2018.

Online Linear Quadratic Control
with Avinatan Hassidim, Tomer Koren, Nevena Lazic, Yishay Mansour, Kunal Talwar,
International Conference on Machine Learning, 2018.

Tight Bounds for Bandit Combinatorial Optimization
with Tamir Hazan and Tomer Koren,
Conference on Learning Theory, 2017.

Online Learning with Feedback Graphs Without the Graphs
with Tamir Hazan and Tomer Koren,
International Conference on Machine Learning, 2016.

Following the Perturbed Leader for Online Structured Learning
with Tamir Hazan,
International Conference on Machine Learning, 2015.

Professional Service

Conference Referee
Conference on Neural Information Processing Systems (NeuRIPS), 2015-2020, 2022.
International Conference on Machine Learning (ICML), 2016-2020, 2022.
Conference on Learning Theory (COLT), 2016-2020, 2022/
Conference on Algorithmic Learning Theory (ALT), 2017-2020.
Society for Artificial Intelligence and Statistics (AISTATS), 2020.
Learning for Decision and Control (L4DC), 2020.
International Symposium on Algorithms and Computation (ISAAC), 2019.
Symposium on Theory of Computing (STOC), 2018.

Program Committee Member
ICML 2020 workshop on Theory of Reinforcement Learning, 2020.
EC workshop on learning in the presence of strategic behavior, 2019.

Journal Referee
Journal of Machine Learning Research (JMLR), 2016.

Book Proposal Referee
Perturbations, Optimization, and Statistics
Tamir Hazan, George Papandreou, and Daniel Tarlow
MIT Press, 2016.

Understanding Machine Learning: From Theory to Algorithms
By Shai Shalev-Shwartz and Shai Ben-David
Cambridge University Press, 2014.

Additional Research Experience

Machine Learning Summer School

Max Planck Institute for Intelligent Systems, Tübingen, Germany, 2013.

Real-time Tracking of Hand and Finger Gestures

Advisor: Prof. Andrei Sharf, 2012

Used Machine Learning methods to track the position and posture of a human hand in real-time from point-cloud data acquired via a low-light 3D scanner.

Work Experience

Tel-Aviv University

Senior Lecturer, 2021-current.

School of Electrical Engineering - Systems.

Google

Research Intern, 2017-2019.

Hosted by Prof. Yishay Mansour. Foundations of Machine Learning group.

Research Scientist, 2019-current.

Foundations of Machine Learning group.

Technion

Teaching assistant, 2015-2017.

Courses: Machine Learning, Probability and Statistics, Discrete Mathematics.

Alcon Systems

Software Programmer, 2009-2011

Development and testing of algorithms for control of mechanical ventilation systems.

Development and testing of algorithms for statistical inference from data acquired via a human bone density scanner.

Israeli Defense Force

Software Programmer, 2003-2008