TEDDY LAZEBNIK

Last update: 22.4.2025

PROFESSIONAL SUMMARY

Mathematical models and algorithms researcher and developer in the fields of epidemiology, medicine, economics, and information systems. More than a decade of experience in software development in the industry, including eight years of experience as an algorithm developer with a focus on data-driven algorithms for bio-medical and financial tasks.

ACADEMIC EDUCATION

Ariel University 2020 - 2021
Ph.D. in (Bio)mathematics

· Thesis about "Modeling and Numerical Calculation of Pandemic Spread and Optimal Oncology Treatment Protocols" - supervised by Prof. Svetlana Bunimovich-Mendrazitsky.

Bar-Ilan University 2017 - 2018
M.Sc. in Applied Mathematics

· Thesis about "Highly Stable Numerical Algorithm for Matrix Exponent" - supervised by Dr. Shlomo Yanetz.

Bar-Ilan University 2013 - 2016
B.Sc. in Applied Mathematics

· Final project about "Observable of Discrete-continuous Linear Time Interval Systems with Continuous Time Measurement".

ACADEMIC EMPLOYMENT

Ariel University, Department of Mathematics October 2023 - Current
Assistant Professor

· Lecturing Calculus 1 + 2 for mathematicians (Bachelor's degree).
· Lecturing Calculus 1 for mechanical engineering (Bachelor's degree).
· Lecturing Introduction to Reinforcement Learning (Bachelor's degree).
· Lecturing Topology (Bachelor's degree).

Reichman University, Department of Computer Science Feb 2023 - July 2023
Teaching Associate

· Lecturing Operation Systems (Bachelor's degree).

Bar Ilan University, Department of Information Science and Department of Management Feb 2023 - July 2023
Teaching Associate

· Lecturing Business Intelligence (Bachelor's degree).
· Lecturing Back-end Development (Bachelor's degree).

Holon Institute of Technology, Department of Computer Science Feb 2023 - July 2023
Teaching Associate

· Lecturing "Introduction To Cybersecurity" (Bachelor's degree).
· Lecturing "The Mathematical Aspects of Cybersecurity" (Master's degree) - my own course.

University College London, Department of Cancer Biology Sep 2021 - Aug 2023
Honorary Post-doctoral researcher (Hosted by Prof Stephan Beck)

· Developed a novel artificial genomics generator using machine learning and bio-genomic models.
· Leading research in the development of personalized medicine through data-driven algorithms.

Bar-Ilan University, Department of Computer Science Jul 2020 - Jul 2021
Research And Teaching Assistant

· Teaching the following courses: Advanced Programming 1 and Advanced Programming 2 - all Bachelor's degree.
· Academic research guidance for Master computer science students' final project.
· Developed a Mathematical model & simulation of nanoparticles-based targeted drug delivery.
· Developed a novel academic search engine from scratch to tackle local concept drift in academic search.

Bar-Ilan University, Department of Mathematics Oct 2018 - Jul 2020
Research And Teaching Assistant

· Teaching the following courses: Partial differential equations (PDE), Introduction to linear mathematical optimization, Numerical Analysis 1, and Tools for Numerical Programming for Engineering - all Bachelor's degree.
· Academic research guidance and code review for Bachelor and Master computer science students' final project.

Holon Institute of Technology, Department of Mathematics Feb 2020 - Jul 2020
Lecturer

· Teaching Deep Learning for Computer Vision (Bachelor's degree).

Holon Institute of Technology, Department of Mathematics Oct 2019 - Feb 2020
Teaching Assistant

· Teaching Numerical Analysis (Bachelor's degree).

ACADEMIC HONORS AND AWARDS

Ariel University 2022
Ph.D. student

· A prize for academic excellence with multiple high-quality publications.

Bar-Ilan University 2017
M.Sc student

· A prize for excellence in studies and research at the master's degree in the name of David Barkovski.

STUDENTS SUPERVISION

Undergraduate students

· Ariel University, Eden Aloni, 2024-Current.
· Bar Ilan University, Chen Tal-Schachar, 2018-2019 (Under the supervision of Prof' Gal A. Kaminka).
· Bar Ilan University, Pedro Nissan, 2017-2017 (Under the supervision of Prof' Gal A. Kaminka).

M.Sc. students

· Jonköping University, Lukas Toral, 2025-2025.
· Jonköping University, Bilge Taskin, 2025-2025.
· Jonköping University, Wenxiong Xie, 2025-2025.
· Bar Ilan University, Ariel Alexi, 2023-2024 (co-advisor with Prof. Ariel Rosenfeld).
· Tel Aviv University, Liron Simon Keren, 2021-2022 (Help to advise with Prof' Alexander Liberzon).
· University College London, Jackson Cheung, 2022 (Help to advise under the supervision of Prof' Stephan Beck).

· Ariel University, Yonatan Herskowitz, 2022-2023 (co-advisor with Prof. Svetlana Bunimovich-Mendrazitsky).

P.hD. students

· Bar Ilan University, Ariel Alexi, 2024-current (co-advisor with Prof. Ariel Rosenfeld).
· Bar Ilan University, Amit Bengiat, 2024-current (co-advisor with Prof. Ariel Rosenfeld).
· Ariel University, Adi Shuchami, 2024-current.
· Bar Ilan University, Dr. Assaf Shmuel, 2023-current (co-advisor with Dr. Oren Glickman).

TEACHING COURSING

Academic courses

· Jonkoping University, Reinforcement learning for engineering [my course] - lecturer, second degree.
· Ariel University, Reinforcement learning for engineering [my course] - lecturer, first degree.
· Bar Ilan University, Cybersecurity in digital transformation [my course] - lecturer, first degree
· Ariel University, Calculus 1 (X2) - lecturer, first degree.
· Ariel University, Calculus 2 (X2) - lecturer, first degree..
· Bar Ilan University, Introduction to cybersecurity for managers [my course] - lecturer, first degree.
· Ariel University, Introduction to reinforcement learning [my course] - lecturer, first degree.
· Reichman University, Operation Systems - leading lecturer, first degree.
· Holon Institute of Technology, Mathematical aspects in cybersecurity [my course] - lecturer, second degree.
· Holon Institute of Technology, Introduction to cybersecurity [my course] - lecturer, first degree.
· Bar Ilan University, Back-end development - lecturer, first degree.
· Bar Ilan University, Business Intelligence - lecturer, first degree.
· Bar Ilan University, Advanced Programming 2 - teaching assistant, first degree.
· Bar Ilan University, Advanced Programming 1 - teaching assistant, first degree.
· Bar Ilan University, Numerical Analysis (X2) - teaching assistant, first degree.
· Bar Ilan University, Introduction to Linear Mathematical Optimization and Tools for Numerical Analysis for Engineers - teaching assistant, first degree.
· Holon Institute of Technology, Deep Learning for Computer Vision tasks - teaching assistant, first degree.
· Holon Institute of Technology, Numerical Analysis - teaching assistant, first degree.
· Bar Ilan University, Introduction to Linear Mathematical Optimization - teaching assistant, first degree.
· Bar Ilan University, Partial Differential Equations - teaching assistant, first degree.

Industry courses

· Naya College, Data Science (420 hours course): Introduction to Programming in Python, Data Analysis, Introduction to Machine Learning, Introduction to Deep Learning, and Introduction to MLOps (X2).
· Y-Data, Introduction to Machine Learning.

SCIENTIFIC PUBLICATIONS

Scientific Journals

1. N. Cohen, M. Davidovich, G. Lotta, **T. Lazebnik**, Trust and Street-Level Bureaucrats' Perceptions about Organizational Readiness for Emergencies. International Public Management Journal. 2025.
2. B. Florkiewicz, **T. Lazebnik**, Combinatorics and Complexity of Chimpanzee (Pan troglodytes) Facial Signals. Animal Cognition. 2025.
3. A. Rosenfeld, **T. Lazebnik**, How Lonely or Influential is the Lone Wolf? An Analysis of Individual Scholars' Solo-Authorship Dynamics. Scientometrics. 2025.
4. **T. Lazebnik**. Pulling the Carpet Below the Learner's Feet: Genetic Algorithm To Learn Ensemble Machine Learning Model During Concept Drift. Engineering Applications of Artificial Intelligence. 2025.

5. M. Kastin, M. Glebov, H. Berkenstadt, Yaniv-Rosenfeld, A. **T. Lazebnik**, Developing Machine Learning-based Prediction Model for Postinduction Hypotension. Journal of Clinical Monitoring and Computing. 2025.

6. A. Shmual, **T. Lazebnik**, O. Glickman, E. Heifetz, C. Price, Lightning-Ignited Wildfires On A Global Scale: Prediction and Climate Change Projections based on Explainable Machine Learning Models. Scientific reports. 2025.

7. M. Glebov, **T. Lazebnik**, M. Kastin, B. Orkin, H. Berkenstadt, S. Bunimovich-Mendrazitsky, Predicting Postoperative Nausea And Vomiting Using Machine Learning: A Model Development and Validation Study. BMC Anesthesiology. 2025.

8. B. Florkiewicz, **T. Lazebnik**, Predicting Social Rankings in Captive Chimpanzees (Pan troglodytes) through Machine Learning and Communicative Interactions. Integrative Zoology. 2025.

9. **T. Lazebnik**, A. Friedman, Spatio-Temporal Model of Combining ADT and Chemotherapy with Senolytic Treatment in Metastatic Prostate Cancer. Journal of Theoretical Biology. 2025.

10. B. Norton, A. Zamansky, B. Florkiewicz, **T. Lazebnik**, The Art of Chimpanzee Diplomacy: Unraveling the Secrets of Successful Negotiations Using AI. Journal of Comparative Psychology. 2025.

11. L. Shami, **T. Lazebnik**, Got much, got nothing: Analyzing the impact of increased special interest groups' influence on utility. Eurasian Economic Review. 2025.

12. V. Aharonson, **T. Lazebnik**, A. Sinai, M. Nassar, I. Senderova, M. Constantinescu, L. T. Lior, I. Schlesinger, Novel objective tool to assess tremor reveals unilateral focused ultrasound improves tremor bilaterally. Neurology and Therapy. 2025.

13. **T. Lazebnik**, A. Friedman, Spatio-Temporal Model of Combining Chemotherapy with Senolytic Treatment in Lung Cancer. Mathematical Biosciences. 2025.

14. A. Shmual, O. Glickman, **T. Lazebnik**, Machine and Deep Learning Performance in Out-of-Distribution Regressions. Machine Learning: Science and Technology. 2024.

15. G. Martvel, **T. Lazebnik**, M. Feighelstein, S. Meller, I. Shimshoni, L. Finka, S. Luna, D. Mills, H. A. Volk, A. Zamansky. Automated Landmark-Based Cat Facial Analysis and its Applications. Frontiers in Veterinary Science. 2024.

16. G. Martvel, L. Scott, B. Florkiewicz, A. Zamansky, I. Shimshoni, **T. Lazebnik**, AI for Feline Faces: A Computational Investigation of the Social Function of Domestic Cat Facial Signals. Scientific Reports. 2024.

17. **T. Lazebnik**, O. Speigel, Individual Variation Affects Outbreak Magnitude and Predictability in Multi-Pathogen Model of Pigeons Vising Dairy Farms. Ecological modeling. 2024.

18. G. Martvel, **T. Lazebnik**, M. Feighelstein, L. Henze, S. Meller, I. Shimshoni, F. Twele, A. Schütter, N. Dorn, S. Kastner, L. Finka, S. P. L. Luna, D. S. Mills, H. A. Volk, A. Zamansky, Automated Video-Based Pain Recognition in Cats using Facial Landmarks. Scientific Reports. 2024.

19. **T. Lazebnik**, L. Shami, A. Rosenfeld, Economical-Epidemiological Analysis of the Coffee Trees Rust Pandemic. Chaos. 2024.

20. **T. Lazebnik**, A. Rosenfeld, A Computational Model For Individual Scholars' Writing Style Dynamics. Journal of Writing Research. 2024.

21. **T. Lazebnik**, Mathematical Model of Dating Apps' Influence on Sexually Transmitted Diseases Spread Dynamics. Social Network Analysis and Mining. 2024.

22. **T. Lazebnik**, O. Iny, Temporal Graphs Anomaly Emergence Detection: Benchmarking For Social Media Interactions. Applied Intelligence. 2024.

23. M. Levi, **T. Lazebnik**, S. Kushnir, N. Yosef, D. Shlomi, Machine Learning Computational Model to predict Lung Cancer Using Electronic Medical Records. Cancer Epidemiology. 2024.

24. **T. Lazebnik**, A. Rosenfeld, Detecting LLM-Assisted Writing in Scientific Communication: Are We There Yet?. Journal of Data and Information Science. 2024.

25. **T. Lazebnik**, Y. Golov, R. Gurka, A. Harari, A. Liberson, Exploration-Exploitation Model of Moth-Inspired Olfactory Navigation. Journal of the Royal Society Interface. 2024.

26. **T. Lazebnik**, S. Bunimovich-Mendrazitsky, Predicting the location of metastates of lung cancer using the location of the original location. Frontiers in Medicine. 2024.

27. A. Shmuel, **T. Lazebnik**, O. Glickman, Symbolic Regression as Feature Engineering Method for Machine and Deep Learning Regression Tasks. Machine Learning: Science and Technology. 2024.

28. A. Alexi, **T. Lazebnik**, A. Rosenfeld, The Scientometrics and Reciprocality Underlying Co-Authorship Panels in Google Scholar Profiles. Scientometrics. 2024.

29. **T. Lazebnik**, L. Simon-Keren, Knowledge-integrated AutoEncoder Model. Expert Systems With Applications. 2024.

30. **T. Lazebnik**, Going a Step Deeper Down the Rabbit Hole: Deep Learning Model to Measure the Size of the Unregistered Economy. Computational economics. 2024.

31. **T. Lazebnik**, S. Bunimovich-Mendrazitsky, More Numerically Accurate Algorithm For Matrix Exponential. Mathematics. 2024.

32. **T. Lazebnik**, Cost-optimal Seeding Strategy During a Botanical Pandemic in Domesticated Fields. Chaos: an interdisciplinary journal of nonlinear science. 2024.

33. **T. Lazebnik**, A. Rosenfeld, A New Definition For Feature Selection Stability Analysis. (Accepted). Annals of Mathematics and Artificial Intelligence. 2024.

34. T. Travain, **T. Lazebnik**, A. Zamansky, S. Cafazzo, P. Valsecchi, E. Natoli, Environmental enrichments and data-driven welfare indicators for sheltered dogs using telemetric physiological measures and signal processing. Scientific Reports. 2024.

35. **T. Lazebnik**, S. Bunimovich-Mendrazitsky, A. Rosenfeld, An Algorithm to Optimize Explainability using Feature Ensembles. Applied Intelligence. 2024.

36. G. Dinu, **T. Lazebnik**, M. Mincu, O. Oren, I. Nicolae, A. Zamansky, BovineTalk: Machine Learning for Vocalization Analysis of Dairy Cattle in Negative Affective States. Frontiers in Veterinary Science. 2024.

37. L. Simon-keren, **T. Lazebnik**, A. Liberzon, Improved Prediction of Settling Behaviour of Solid Particles through Machine Learning Analysis of Experimental Retention Time Data. International Journal of Multiphase Flow. 2024.

38. **T. Lazebnik**, L. Shami, S. Bunimovich-Mendrazitsky, Hybrid Mathematical Model for Optimal Border Closure Policy during Pandemic. International Journal of Applied Mathematics and Computer Science. 2023.

39. N. Farhat, **T. Lazebnik**, J. Monteny, C. Moons, E. Wydooghe, D. van der Linden, A. Zamansky, Digitally-Enhanced Dog Behavioral Testing: Getting Help from the Machine. Scientific Reports. 2023.

40. J. Magana, D. Gavojdian, Y. Menachem, **T. Lazebnik**, A. Zamansky, A. Adams-Progar, Machine Learning Approaches to Predict and Detect Early-onset of Digital Dermatitis in Dairy Cows using Sensor Data. Frontiers in Veterinary Science. 2023.

41. A. Oren, J. D. Turkcu, S. Meller, **T. Lazebnik**, P. Wiegel, R. Mach, H. A. Volk, A. Zamansky, BrachySound: Machine Learning Based Assessment of Respiratory Sounds in Dogs. Scientific Reports. 2023.

42. **T. Lazebnik**, D. Gorlitsky, Can We Mathematically Spot Possible Manipulation of Results in Research Manuscripts Using Benford's Law?. Data. 2023.

43. **T. Lazebnik**, S. Beck, L. Shami, Academic Collaboration is a Risky Game. Scientometrics. 2023.

44. N. Cohen, G. Lotta, **T. Lazebnik**, Trust and Street-Level Bureaucrats' Willingness to Risk Their Lives for Others: The Case of Brazilian Law Enforcement. The American Review of Public Administration. 2023.

45. **T. Lazebnik**, T. Fleischer, A. Yaniv-Rosenfeld, Benchmarking Biologically-inspired Automatic Machine Learning for Economic Tasks. Sustainability. 2023.

46. **T. Lazebnik**, Data-driven Hospitals Staff And Resources Allocation Using Agent-Based Simulation and Deep Reinforcement Learning. Engineering Applications of Artificial Intelligence. 2023.

47. **T. Lazebnik**, L. Simon-Keren, Cancer-inspired Genomics Mapper Model for the Generation of Synthetic DNA Sequences with Desired Genomics Signatures. Computers in Biology and Medicine. 2023.

48. A. Alexi, A. Rosenfeld, **T. Lazebnik**, Multi-Species Prey-Predator Dynamics During a Multi-Strain Pandemic. Chaos: An Interdisciplinary Journal of Nonlinear. 2023.

49. N. Vardi, **T. Lazebnik**, The Causal Role of Lockdowns in COVID-19: Conclusions from Daily Epidemiological, Psychological, and Sociological Data. Psychiatric Quarterly. 2023.

50. **T. Lazebnik**, S. Bunimovich-Mendrazitsky, A. Kiselyov, Mathematical Model for BCG-based Treatment Of Type 1 Diabetes. Physica A: Statistical Mechanics and its Applications. 2023.

51. Y.Herskowitz, S. Bunimovich-Mendrazitsky, **T. Lazebnik**, Mathematical Model Of Coffee Tree's Rast Control Using Snails As Biological Agents. Biosystems. 2023.

52. D. Krongauz, **T. Lazebnik**, Collective Evolution Learning Model for Vision-Based Collective Motion with Collision Avoidance. Plos One. 2023.

53. A. Alexi, **T. Lazebnik**, L. Shami, Microfounded tax revenue forecast model with heterogeneous population and genetic algorithm approach. Computational Economics. 2023.

54. **T. Lazebnik**, A. Rosenfeld, FSPL: A meta-learning approach for a filter and embedded feature selection pipeline. Applied Mathematics and Computer Science. 2023.

55. **T. Lazebnik**, S. Bunimovich-Mendrazitsky, Decision Tree Post-Pruning Without Loss Of Accuracy using the SAT-PP algorithm with an Empirical Evaluation on Clinical Data. Data & Knowledge Engineering. 2023.

56. **T. Lazebnik**, L. Shami, S. Bunimovich-Mendrazitsky, Intervention Policy Influence on the Effect of Epidemiological Crisis on Industry-Level Production Through Input-Output Networks. Socio-Economic Planning Sciences. 2023.

57. A. Yaniv-Rosenfeld, E. Savchenko, A. Rosenfeld, **T. Lazebnik**, Scheduling BCG and IL-2 Injections for Bladder Cancer Immunotherapy Treatment. Mathematics. 2023.

58. L. Shami, **T. Lazebnik**, Implementing Machine Learning Methods in Estimating the Size of the Non-Observed Economy. Computational Economics. 2023.

59. L. Shami, **T. Lazebnik**, Financing and managing epidemiological-economic crises: Are we ready for another outbreak?. Journal of Policy Modeling. 2023.

60. L. Simon-Keren, A. Liberson, **T. Lazebnik**, A Computational Framework For Physics-Informed Symbolic Regression with Straightforward Integration of Domain Knowledge. Scientific Reports. 2023.

61. **T. Lazebnik**, A. Alexi, High resolution spatio-temporal model for room-level airborne pandemic spread. Mathematics. 2023.

62. **T. Lazebnik**, U. Itai, Bounding Pandemic Spread By Heat Spread. Journal of Engineering Mathematics. 2023.

63. A. Alexi, A. Rosenfeld, **T. Lazebnik**, A Security Games Inspired Approach for Distributed Controlling Of Pandemic Spread. Advanced Theory and Simulations. 2022.

64. **T. Lazebnik**, S. Bunimovich-Mendrazitsky, S. Ashkenazi, E. Levner, A. Benis, Early Detection and Control of the Next Epidemic Wave using Health Communications: Development of an Artificial Intelligence-based

Tool and its Validation on COVID-19 Data from the US. International Journal of Environmental Research and Public Health. 2022.

65. Y. A. Veturi, W. Woof, **T. Lazebnik**, I. Moghul, P. Woodward-Court, S. K. Wagner, T. A. C. de Guimarães, M. D. Varela, B. Liefers, S. Beck, A. R. Webster, O. Mahroo, P. A. Keane, M. Michaelides, K. Balaskas, N. Pontikos, SynthEye: Investigating the impact of synthetic data on AI-assisted gene diagnosis of Inherited Retinal Disease. Ophthalmology Science. 2022.

66. A. Alexi, A. Rosenfeld, **T. Lazebnik**, The Trade-off Between Airborne Pandemic Control and Energy Consumption Using Air-Ventilation Solutions. Sensors. 2022.

67. L. Shami, **T. Lazebnik**, Economic Aspects of the Detection of New Strains in a Multi-Strain Epidemiological Mathematical Model. Chaos, Solitons & Fractals. 2022.

68. **T. Lazebnik**, Cell-level Spatio-Temporal Model for Bacillus Calmette-Guerin Based Immunotherapy Treatment Protocol of Superficial Bladder Cancer. Cells. 2022.

69. T. Gargantini, M. Daly, J. Sherlock, **T. Lazebnik**. Providing Safe Space for Honest Mistakes in the Public Sector Is The Most Important Predictor For Work Engagement After Strategic Clarity. Sustainability. 2022.

70. **T. Lazebnik**, Z. Bahouth, S. Bunimovich-Mendrazitsky, S. Halachmi, Predicting Acute Kidney Injury Following Open Partial Nephrectomy Treatment Using SAT-Pruned Explainable Machine Learning Model. BMC Medical Informatics and Decision Making. 2022.

71. **T. Lazebnik**, S. Bunimovich-Mendrazitsky, Generic Approach For Mathematical Model of Multi-Strain Pandemics. Plos One. 2022.

72. S. Natan, **T. Lazebnik**, E. Lerner, A distinction of three online learning pedagogic paradigms. SN Social Science. 2022.

73. Z. Zemah-Shamir, S. Zemah-Shamir, A. Scheinin, D. Tchernov, **T. Lazebnik**, G. Gal, A Systematic Review of the Behavioural Changes and Physiological Adjustments of Elasmobranchs and Teleost's to Ocean Acidification with a Focus on Sharks. Fishes. 2022.

74. **T. Lazebnik**, G. Blumrosen, Advanced Muti-Mutation with Intervention Policies Pandemic Model. IEEE Access. 2022.

75. E. Savchenko, **T. Lazebnik**, Computer Aided Functional Style Identification and Correction In Modern Russian Texts. Journal of Data, Information and Management. 2022.

76. **T. Lazebnik**, A. Alexi, Comparison of Pandemic Intervention Policies in Several Building Types Using Heterogeneous Population Model. Communications in Nonlinear Science and Numerical Simulation. 2022.

77. **T. Lazebnik**, L. Shami, S. Bunimovich-Mendrazitsky, Pandemic Management by a Spatio-temporal Mathematical Model. International Journal of Nonlinear Sciences and Numerical Simulation. 2021.

78. **T. Lazebnik**, S. Bunimovich-Mendrazitsky, L. Shaikhet, Novel Method to Analytically Obtain the Asymptotic Stable Equilibria States of Extended SIR-type Epidemiological Models. Symmetry. 2021.

79. **T. Lazebnik**, L. Shami, S. Bunimovich-Mendrazitsky, Spatio-Temporal Influence of Non-Pharmaceutical Interventions Policies on Pandemic Dynamics and the Economy: The Case of COVID-19. Economic Research-Ekonomska Istrazivanja. 2021.

80. **T. Lazebnik**, S. Bunimovich-Mendrazitsky, The signature features of COVID-19 pandemic in a hybrid mathematical model - implications for optimal work-school lockdown policy. Advanced Theory and Simulations. 2021.

81. **T. Lazebnik**, S. Bunimovich-Mendrazitsky, N. Aaroni, PDE based geometry model for BCG immunotherapy of bladder cancer. Biosystems. 2020.

Review Articles

1. **T. Lazebnik**, Computational Applications of Extended SIR Models: A Review Focused on Airborne Pandemics. Ecological Modelling. 2023.

Proceedings Papers

1. **T. Lazebnik**, A. Somech, Demonstrating SubStrat: A Subset-Based Strategy for Faster AutoML on Large Datasets. International Conference on Very Large Data Bases (VLDP). 2023.
2. **T. Lazebnik**, S. Bunimovich-Mendrazitsky, Improved Geometric Configuration for the Bladder Cancer BCG-based Immunotherapy Treatment Model. ISMCO. 2021.

Manuscripts Submitted / Under Review

1. **T. Lazebnik**, H. Weitman, Y. Goldberg, G. A. Kaminka, Rivendell: Project-Based Academic Search Engine.
2. N. Cohen, **T. Lazebnik**, Agent-Based Simulation of Street-Level Bureaucrats' Prosocial Tendencies in the Traditional, NPM, and Post-NPM Approaches to Public Administration.
3. L. Shami, **T. Lazebnik**, O. Akirev, Analysis of the Optimal Number of Ministers: The Case of Israel.
4. **T. Lazebnik**, A. Yaniv-Rosenfeld, The Family Tree Graph as a Predictor of the Family Members' Satisfaction with One Another.
5. L. Shami, **T. Lazebnik**, Cooperative Game Theory Model for Sustainable UN Financing: Addressing Global Public Goods Provision.
6. A. Rosenfeld, A. Alexi, L. Mushiev, **T. Lazebnik**, The The Academic Midas Touch: Evaluating and Clustering Applied Mathematics Researcher's Academic Excellency.
7. N. Vardi, **T. Lazebnik**, M. Bar, Data-Using Machine Learning to Evaluate Ruminative Thinking From Associative Responses.
8. R. Peleg, **T. Lazebnik**, A. Hoogi. FAME: Mitigating Lag and Improving Accuracy in EMA-Based Optimization.
9. O. Edri-Peer, **T. Lazebnik**, N. Cohen, Which People Obey the Law? A Decision Tree Model for Profiling Vigilantes.
10. **T. Lazebnik**, A. Rosenfeld, Whose LLM is it Anyway? Linguistic Comparison and LLM Attribution for GPT-3.5, GPT-4 and Bard.
11. **T. Lazebnik**, Transforming Norm-based To Graph-based Spatial Representation for Spatio-Temporal Epidemiological Models.
12. L. Schwartz, N. Matania, M. Levi, **T. Lazebnik**, S. Kushnir, N. Yosef, A. Hoogi, D. Shlomi, Lung Cancer Risk Prediction Based on Blood-Tests and Machine Learning Model.
13. A. Shmual, **T. Lazebnik**, O. Glickman, Follow the Forest Trail: Data Augmentation by Gradient Boosting Models to Enhance Symbolic Regression Performance.
14. **T. Lazebnik**, Evaluating Supply Chain Resilience During Pandemic Using Agent-based Simulation.
15. A. Shmual, O. Glickman, **T. Lazebnik**, Data Augmentation for Deep Learning Regression Tasks by Machine Learning Models.
16. A. Shmual, O. Glickman, **T. Lazebnik**, A Comprehensive Benchmark of Machine and Deep Learning Across Diverse Tabular Datasets.
17. A. Shmual, O. Glickman, **T. Lazebnik**, Interpretable Knowledge Distillation via Symbolic Regression for Feedforward Neural Networks.
18. **T. Lazebnik**, Introducing 'Inside' Out of Distribution.
19. **T. Lazebnik**, A Data-Driven Scientometric Metric That Predicts Recommendation Letter Chances For Professor Promotion.

20. A. Solomon, M. Glebov, **T. Lazebnik**, Explainable Surgical Procedures Recommender System Leveraging Large Language Models.

21. **T. Lazebnik**, S. Aviv-Reoven, A. Rosenfeld, Publishing Instincts: An Exploration-Exploitation Framework for Studying Academic Publishing Behavior and "Home Venues".

22. **T. Lazebnik**, L. Zalmanson, O. Mokryn, Mind Your Manners: The Dynamics of Politeness in Human-AI vs. Human-Human Interactions.

23. **T. Lazebnik**, A. Friedman, Comparing Partial Differential Equations and Agent-based Simulations in Spatio-temporal Modeling of Cancer Growth and Shape.

24. A. Shuchami, **T. Lazebnik**, V. Shkalim Zemer, A. Herm Cohen, S. Ashkenazi, Shall We Repeat? Predicting The Necessity to Repeat Testing in Pediatric Emergency Departments of Laboratory Testing Previously Performed in the Community Using Machine Learning.

25. M. Glebov, M. Katsin, H. Berkenstadt, D. Orkin, A. Yaniv-Rosenfeld, A. Shuchami, **T. Lazebnik**, Postinduction blood pressure trajectories: clustering and predictive modelling using machine learning.

26. A. Shuchami, **T. Lazebnik**, Spatio-Temporal SIR Model of Pandemic Spread During Warfare with Optimal Dual-use Healthcare System Administration using Deep Reinforcement Learning.

27. N. Cohen, **T. Lazebnik**, Y. Khalatnik, The Impact of Collective Performance-Related Pay on Street-Level Bureaucrats Performance and Clients' Outcomes.

28. **T. Lazebnik**, Y. Sam, J. Tichon, R. Lapid, R. King, T. Nissimian, O. Spiegel, An Empirically-parametrized Spatio-Temporal Extended-SIR Model for Combined Dilution and Vaccination Mitigation for Rabies Outbreaks in Wild Jackals.

29. **T. Lazebnik**, S. Bunimovich-Mendrazitsky, A. Alexi, Modeling the Effects of Pandemics on Physiology-related Fertility Decline in Society.

30. **T. Lazebnik**, L. Shami, Investigating Tax Evasion Emergence Using Dual Large Language Model and Deep Reinforcement Learning Powered Agent-Based Simulation.

31. **T. Lazebnik**, A. Friedman, PDE and Agent Based Simulation Approaches to Ischemic Dermal Wound Healing.

32. G. Martvel, G. Pedretti, **T. Lazebnik**, A. Zamansky, Y. Ouchi, T. Monteiro, N. Farhat, I. Shimshoni, D. Grinstein, Y. Michaeli, P. Valsecchi, N. Hall, S. Marshall-Pescini, Does the tail show when the nose knows? AI outperforms human experts at predicting detection dogs finding their target through tail kinematics.

33. U. Itai, A. Bar Ilan, **T. Lazebnik**, Tighten The Lasso: A Convex Hull Volume-based Anomaly Detection Method.

34. A. Shmuel, **T. Lazebnik**, E. Heifetz, O. Glickman, C. Price, Country-Specific Explainable Fire Weather Indices Enhanced by Artificial Intelligence.

35. O. Mokryn, **T. Lazebnik**, H. Ben Shoshan, Interpretable Transformation and Analysis of Timelines through Learning via Surprisability.

36. E. Kanevsky, **T. Lazebnik,** R. Kaspi, Y. Gazit, E. Halon, D. Fried, A. Zamansky, G. Pines, Non-Invasive Computer Vision-Based Fruit Fly Larvae Classification: Ceratitis capitata and Bactrocera zonata.

37. **T. Lazebnik,** V. Aharonson, Chronic Stress, Immune Suppression, and Cancer Risk: Evidence from Surveys and Predictive Models.

38. A. Shuchami, **T. Lazebnik,** S. Ashkenazi, A. H. Cohen, Y. Reichenberg, V. Shkalim-Zemer, Machine Learning-Based Guide for Repeated Laboratory Tests in Pediatrics and Suggested Calculator.

39. A. Shuchami, M. Glebov, M. Katsin, H. Berkenstadt, D. Orkin, **T. Lazebnik**, Comparing Manual vs. Automated Machine Learning and Deep Learning Models for Predicting One-Year Mortality in Elderly Hip Fracture Patients.

Grants received

1. "Incidence and risk factors for recurrent urinary tract infection in children caused by bacilli ESBL", 15000 NIS - received 7500 NIS.
2. "Implementation of artificial intelligence methods to improve early detection of disease outbreaks, public responses, prevention and management", 15000 NIS - received 4000 NIS.

Editorial work

1. **Journal:** Plos One. **Position:** Editor, 1.2025 - Current.
2. **Journal:** Cells. **Position:** Guest editor of a special issue entitled "Cell-Cell Interaction Modelling of Cancer Immunotherapy Treatments", 1.2022 - 2.2023.
3. **Journal:** Frontiers in Applied Mathematics and Statistics. **Position:** Review editor, 12.2022 - 08.2024.

Conference Talks (selected)

1. **Subject: Lazebnik, T.**, Shami, L., Got much, got nothing: Analyzing the impact of increased special interest groups' influence on utility.
   Conference: The 47th Eurasia Business and Economics Society conference, 04.2024.
2. **Subject:** Simon-Keren, L., **Lazebnik, T.**, Liberzon, A., Predictive correlations for particle motion across a stratified interface using machine learning .
   Conference: The 14th International ERCOFTAC symposium on Engineering, Turbulence, Modelling and Measurements, 09.2023.
3. **Subject: Lazebnik, T.**, Using ML models in infectious diseases prediction with economical constraints.
   Conference: AI2 - medicine in the AI Era, 05.2023.
4. **Subject: Lazebnik, T.** and Bunimovich-Mendrazitsky, S., Extended Mathematical Model for the BCG-based Treatment of Type 1 Diabetes.
   Conference: Dynamical Systems Applied To Biology And Natural Science, 02.2023.
5. **Subject: Lazebnik, T.** and Bunimovich-Mendrazitsky, S., Mathematical Model for the BCG-based Treatment of Type 1 Diabetes.
   Conference: Dynamical Systems Applied To Biology And Natural Science, 02.2022.
6. **Subject:** Shami, L. and **Lazebnik, T.**, Financing and Managing Epidemiological-Economic Crisis: The Reserve Model.
   Conference: ICEA, Public Policy Lessons conference, 11.2021.
7. **Subject: Lazebnik, T.**, Shami, L., and Bunimovich-Mendrazitsky, S., Epidemiological-Economical Pandemic Management By A Spatio-Temporal Mathematical Model.
   Conference: Dynamical Systems Applied To Biology And Natural Science, 02.2021.