

Bronya Roni Chernyak

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FIELDS OF INTEREST	<i>Machine Learning, Deep Learning, Machine Learning Security, Speech Processing and Recognition.</i>	
EDUCATION	Bar-Ilan University	
	<ul style="list-style-type: none">• Ph.D. Computer Science 2020 - Present Research Topics: Adversarial Robustness, Speech Synthesis and Interperatability Advisor: Prof. Joseph Keshet• M.Sc Computer Science 2018 - Present Dissertation: Improving Adversarial Robustness Of Deep Learning Algorithms Advisor: Prof. Joseph Keshet• B.Sc Computer Science and Neuro-Science 2015 - 2018	
PUBLICATIONS	<ul style="list-style-type: none">• Constant Random Perturbations Provide Adversarial Robustness with Minimal Effect on Accuracy - Chernyak Bronya Roni, Joseph Keshet Under submission to ICML 2021• Kalman Filter for Adversarial Noise Removal - Chernyak Bronya Roni, Joseph Keshet, Satoru Momiyama Under submission to Interspeech 2021	
PROJECTS	Identifying Creacky Voice in Fluent Speech	October 2018 - Present
	<p>Designed and implemented an algorithm for detecting a special type of phonation called creaky voice using fully connected deep network, and convolutional neural network.</p> <ul style="list-style-type: none">• Tools & Technology: Speech Processing and Recognition, Pytorch, Praat, STFT, Deep Neural Networks (CNN and others).	
	Detecting Wild Animals In Videos	April - July 2018
	<p>Created an algorithm for real-time tracking of wild animals in videos, and detecting two types of their behaviours. The algorithm was based on YOLO (CNN) and granted an automated analysis of hours of video recordings.</p> <ul style="list-style-type: none">• Tools & Technology: Darknet framework, Yolo, Object Detection, Python, C.	
	Neurons Unsupervised Classification	July - October 2017
	<p>The project's goal was to classify neurons in an objective way, without human interference. To model the problem, I used unsupervised learning setting with the appropriate algorithms.</p> <ul style="list-style-type: none">• Technology & Algorithms: DTW, K-Means, PCA, Scikit Learn.	
WORK EXPERIENCE	Teaching Assistant	2020-2022
	Advanced Topics In Machine Learning	
	Software Developer at IMDSoft	2013 - 2014
	C#, .Net 4.5 & SQL Server 2014, WPF, TFS 2014	
	Full Stack Developer at IDF	2011 - 2013
	C#, .Net 3.5 & SQL Server 2010, WPF, TFS 2010, WinForms	

TECHNICAL SKILLS

Languages: Python, C#, C

Database: SQL Server

Familiar With: Java, Matlab, Javascript, HTML, CSS, C++