

Taras Sereda. ML Researcher



Hi, I'm a **startup founder and Machine Learning researcher** based in **Kyiv, Ukraine** with **10 years of experience** in tech. My focus area for the past few years has been ML for audio, TTS modelling, ASR. I'm a visiting scholar at UCU (Lviv, Ukraine) and periodically I'm giving talks and lectures on various ML topics for audio and image processing.

Contacts and useful links

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[🐙 github.com/taras-sereda](https://github.com/taras-sereda)

Experience

Founder, ML researcher

CrossLingual.io Kyiv, Ukraine – (Sep 2022 - present)

Early stage startup focusing on multilingual voices translations. Already with early adopters, on a pre-seed stage.

Co-founder, Director of Research

Vocalics.ai Kyiv, Ukraine – (Feb 2019 - Sep 2022)

I co-founded Vocalics.ai with the idea of multilingual speech synthesis in mind when a speaker's identity and unique speaking style are preserved with voice translation to world languages.

As a Co-founder:

- Hiring top executives, as well as key engineers for ML, back-end, and front-end teams.
- One-o-one and performance valuation of the engineering team in the Kyiv office, 15 people.
- Customer Development. Interviews with early adopters of our speaker identity-preserving TTS
- Technical supervision of integration between front-end, back-end, ML teams.

As a Director of research:

- Managed ML research team of 4 people: long and short-term planning, code reviews, brain-storming new ideas, coaching and onboarding new employees, people management.
- Reimplemented, tested, and modified many SOTA papers from the speech synthesis field, including autoregressive, parallel TTSS, Flow-based, Diffusion models, GANs, VAEs.
- Developed core algorithms for identity and style-preserving speech generation. Neural Networks, VAEs, Diffusion Models, Dynamical Programming.
- Developed algorithms for quality evaluation of synthesized speech in dimensions of Intelligibility, Speaker Similarity, and others.
- Our team built from scratch and maintained multi-GPU DL rigs for in-house ML research projects.

ML Engineer

Whisper.ai San Francisco, CA, USA - (Feb 2018 - Jul 2018)

Developed advanced audio source separation models based on neural networks. Eventually, models were deployed on ARM devices, with the end goal of helping people with mild hearing loss to hear better in noisy environments (restaurants/public transport/public spaces)

ML Researcher

Ring Labs Kyiv, Ukraine - (Sep 2016 - Apr 2017)

First employee in Ukrainian R&D office, hired to establish ML department, was leading a research team.

- Object detection algorithms based on R-CNN, YOLO. With highly customized implementations developed in-house.
- image and video analysis

Skills: Tensorflow, Pytorch, Python, Leadership, Mentoring.

ML Engineer

SyncWords Kyiv, Ukraine - (Dec 2015 - Sep 2016)

Developed deep learning models for closed captioning automation and language modeling.

Skills: GPU computing, Tensorflow, Python, Java.

ML Engineer (Part time)

IPGraphy Kyiv, Ukraine - (Oct 2015 - Jun 2016)

Developed core algorithm for visual object similarity search applied for images of trade marks. IP rights NN based tool, aimed to help attorneys achieve higher productivity.

Skills: Image classification and clustering, GPU computing, convolutional NNs

ML Engineer

DepositPhotos Kyiv, Ukraine – (Dec 2014 - Dec 2015)

Developed core algorithms for virtual stylist app.

- Recommender system, suggests how to combine clothes of your wardrobe
- Neural networks for automatic clothes classification and wardrobe categorization

Software Engineer

OrgaSystems Kyiv, Ukraine – (Mar 2013 - Dec 2014)

worked for various mobile operator clients in Middle East and Eastern Europe.

- performance tuning databases
- bug fixing in C++ application code
- providing on-site consultations
- building reporting solutions
- performance/functional testing
- billing and invoicing configuration
- data migration of millions of subscribers.

Skills: data migration, PL/SQL, Python, C++, shell scripting

Languages

Ukrainian 

Native speaker

English 

Proficient speaker

Courses and Talks

- Course Deep Learning for Audio Projector 2019, UCU Summer Schoold 2020

- "VocalicsAI. Artificial intelligence removes language barriers" Talk at FW days, 2021
 - "Waveglow. Generative modeling for audio synthesis" Talk at FW days, 2019
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Education

Masters's Degree in Mathematical Modelling

2011 - 2012

KNEU - Kyiv, Ukraine

Bachelor's Degree in Cybernetics

2007 - 2011

KNEU - Kyiv, Ukraine