

Ostap Viniavskiyi

Computer Vision Engineer

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Experience

Computer Vision Engineer

Jun 2022 - Present

DressX, Remote

- Participated in product research and development of novel single photo Virtual Try-On method
- Took part in the following stages of product development: research, data collection, research organization, communication with the company's management
- Involved in the problems of human pose and shape estimation, human parsing, inpainting
- Worked on deployment of the multi-stage system
- Lead team of 4 computer vision engineers

Algorithms: SMPLify-X based avatar estimation, Stable Diffusion/StyleGAN based generation/inpainting, PBR rendering

Technologies: torch, CUDA, rendering pipelines, SMPL/SMPL-X, diffusers, celery, torchserve, FastAPI

R&D Engineer

Mar 2021 - Nov 2022

SoftServe, Lviv, Ukraine

- Implemented from scratch state-of-the-art Reinforcement Learning algorithms
- Developed distributed training algorithms
- Worked on the explainable and adversarially robust AI algorithms

Algorithms: (Continuous) Agent57, Actor-Critic, DDPG, XAI, Adversarially Robust Networks

Technologies: torch, jax, acme, launchpad

Data Scientist

Mar 2021 - Feb 2022

Avenga, Lviv, Ukraine

- Developed machine learning, deep learning and statistical models
- Responsible for the entire research: data gathering, preparation, model creation, performance measurement
- Worked on purchasing probability prediction, customer segmentation, churn rate prediction, homonymous authors detection, topic modeling, investment propensity prediction, anomaly detection for investments problems

Teacher Assistant

Sep 2020 - Present

Ukrainian Catholic University, Lviv, Ukraine

- Prepared and gave lectures on the Computer Vision, Multiple-View Geometry, and Deep Learning
- mentored students final projects, helped students with course material, graded and commented students homework

Computer Vision Researcher

Jan 2020 - Apr 2022

ML Lab at UCU, Lviv, Ukraine

- Worked on the following projects: weakly-supervised semantic segmentation on medical data, 3D Brain Tumors segmentation
- image matching using deep learning, SuperGlue open-source re-implementation, learning-to-optimize for geometric tasks, novel RANSAC methods development

Projects

[Learning Discriminative Context-Aware Keypoints Representations](#)

2021

ML Researcher Lviv, Ukraine

- Developed the model for keypoints matching on images based on attention graph neural networks and metric learning loss functions.

[Weakly Supervised Medical Images Segmentation](#)

2020

ML Researcher Lviv, Ukraine

- Developed the model for semantic segmentation of images from both general and medical domains. The algorithms learned only from the image-level information, without the access to pixel-level labeling.

Achievements

- Speaker at IT Arena** Oct 2021
IT Arena, Lviv, Ukraine
Topic: [Federated Learning: a Look Under the Hood](#)
- Publication at AIME conference** Jul 2020
AIME 2020, conference, virtual
Topic: [Weakly-Supervised Segmentation for Disease Localization in Chest X-Ray Images](#)
- 3rd place at Learning from Imperfect Data challenge** Jun 2020
CVPR 2020, workshop, virtual
Topic: [NoPeopleAllowed: The Three-Step Approach to Weakly Supervised Semantic Segmentation](#)

Skills & Certifications

Programming:

- Python, numpy, pandas, scikit-learn, xgboost, prophet, Flask, PySpark, SQL, NoSQL, experience with C/C++, Rust, CUDA

ML and DL skills:

- Data mining, feature engineering, image processing, text processing, 2D and 3D vision NN architectures, CNNs, RNNs, Transformers, Multiple-View Geometry, Reinforcement Learning

Frameworks:

- PyTorch, jax, OpenCV, diffusers

Languages: English (C1 certified), Ukrainian (Native)

Certifications: [Microsoft Certified: Azure Data Scientist Associate](#) (Aug 2021)

Education

- UCU (Ukrainian Catholic University)** 2024 - 2028
Ph.D. in Computer science, Lviv, Ukraine
Topic: [Methods for Human Digital Avatar Reconstruction](#)
- UCU (Ukrainian Catholic University)** 2022 - 2024
M.Sc. in Computer science, Lviv, Ukraine
Thesis: [Controllable synthetic image datasets generation for advancements in human pose and shape estimation](#)
Total mark: 90 / 100
- UCU (Ukrainian Catholic University)** 2017 - 2021
B.Sc. in Computer science, Lviv, Ukraine
Thesis: [Learning Discriminative Context-Aware Keypoints Representations for Resolving Ambiguous Matches](#)
Total mark: 96 / 100