Anna Vorontsova

Data Scientist/AI Researcher

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LinkedIn

Google Scholar Personal page

M.Sc. in Data Science (2020), B.Sc in Applied Mathematics (2018) from one of the best Russian universities (QS: world's top 400, top 200 in Computer Sciences). 6+ years of industrial and research experience, focus on Computer Vision. Experience: Samsung. 10 research papers at top-tier conferences (**CVPR, ECCV, AAAI, WACV, IROS**), h-index=7. Hands-on experience with various models **(CNN, Transformers)** and frameworks **(PyTorch, Tensorflow)**.

Experience

May 2024 – till now
NEURA Robotics GmbH
Deep Learning Expert, 2D/3D Computer Vision
Python, PyTorch, Open3D, OpenCV, trimesh, blenderproc, ultralytics, TensorRT

- Adapted existing 3D reconstruction, depth estimation, object segmentation methods for robotic scenarios. Developed new methods of antipodal and suction grasp generation. Optimized models (onnx, TensorRT).
- Generated data for training and benchmarking developed methods.
- Wrote documentation on AI Safety, customer manuals and internal guides.

Oct 2018 – Apr 2024
Samsung AI Center
AI Researcher, 2D/3D Computer Vision
Python, PyTorch, Tensorflow, Open3D, OpenCV, trimesh

- Developed state-of-the-art 2D and 3D computer vision algorithms: SLAM, visual localization, 3D reconstruction of indoor scenes, depth estimation, object segmentation, 2D and 3D object detection.
- Co-authored 19 academic papers accepted to top-tier CV and robotics conferences. Served as a reviewer. Prepared international patents on technical inventions.
- Developed prototypes of visual odometry, indoor localization, RGBD-based object weight measurement.
- Collected, labeled and prepared data for prototyping and research of visual navigation, 3D reconstruction of indoor scenes, visual analytics for retail.
- Wrote papers, regular reports, patents, tasks for data annotators, internal guides.

Jun 2017 – Oct 2018
Rambler&Co *(a media holding company)*
Junior Data Scientist, Computer Vision
Python, PyTorch, Keras, scikit-learn, OpenCV

- Developed segmentation, detection, tracking algorithms for video surveillance in cinemas.
- Collected, labeled, and prepared training data.
- The results convinced top management to create a computer vision department focusing on this task. The implemented solution was used to count visitors in over 700 cinema halls in Russia.

Education

Sep 2014 – Jun 2018
Bachelor of Applied Mathematics
Machine Learning and Applications track
HSE University, GPA 4.69 (8.1/10)

Sep 2018 – Jun 2020
Master of Data Science
HSE University, GPA 4.5 (8.68/10)

Sep 2018 – Jun 2020
Data Scientist, Advanced track
Yandex School of Data Analysis
(independent 2-year DS school organized by Yandex, the largest Russian IT company)

Technical Skills

Code:	Python
ML:	scikit-learn, NumPy, SciPy, Pandas
CV:	OpenCV, Open3D, trimesh, blenderproc
DL:	PyTorch, Tensorflow, detectron2, mm-*, ultralytics, TensorRT
Tools:	Git, Docker

Languages

Russian	(native)
English	(upper-intermediate)
German	(elementary)

Awards

2023 Bronze Samsung Best Paper Award-2023 (top-25 research papers at Samsung)
2022 Outstanding reviewer at NeurIPS 2022.