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Menlo Park, CA

Oleksij Sidorov

WORKING EXPERIENCE

Aug 2019 – Aug 2020

AI Resident (Research Engineer)   *Menlo Park, CA, USA*
Facebook AI Research

S: Marcus Rohrbach. Vision and Language Team. Designing and training ML models for Image Captioning and VQA. Collection and analysis of large computer vision dataset TextCaps. https://textvqa.org/textcaps

Jan – Mar 2019

Research Intern   *Oxford, United Kingdom*
University of Oxford

S: Hannah Smithson. Processing and enhancement retinal data; unsupervised segmentation using GAN models; designing and conducting a psychophysical experiment with eye-tracker.

Aug 2018 – Jul 2019

Teaching Assistant – Computer Vision   *Gjøvik, Norway*
Research Assistant
Norwegian University of Science and Technology (NTNU)

Support of lectures and lab sessions; Assistance to students in their projects; Giving Lectures.

Jun – Aug 2018

Research Intern   *Leuven, Belgium*
KU Leuven

S: Johan Wagemans. Image segmentation, feature extraction, clustering, and data analysis for image memorability study. Included collaborations with A Torralba and A Oliva (MIT CSAIL), CH Demarty and QKN Duong (Technicolor Inc.), Luc Van Gool's lab (KU Leuven).

2015 – 2017

Physics and Mathematics tutor (>20 students)   *Kyiv, Ukraine*

EDUCATION

2017 – 2019

MS Applied Computer Science
Two-year (120 ECTS) Erasmus+ Joint Master Degree:
1st position in a group ranking, the highest score in each subject

Norwegian University of Science and Technology (NTNU)   *Gjøvik, Norway*
Master Applied Computer Science

Introduction to Artificial Intelligence, Video Processing, Specialization in Color Imaging, Medical Imaging

University of Lyon (UDL)   *Saint-Étienne, France*
Master Optics, Image, Vision, Multimedia (Applied Computer Science)

Data Analysis, Applied Colour Science, Digital Image Fundamentals, Introduction to Specialization Fields and Industrial Study Cases, Applied Optics and Photonics, Introduction to MatLab, Introduction to scientific programming.

University of Granada (UGR)   *Granada, Spain*
Master Universitario en Ciencia y Tecnologia del Color (Computer Science)

Data Science, Computer Vision, Human Perception, Spectral Science, Advanced Applied Colorimetry, Digital Innovation and Entrepreneurship

| 2013 – 2017 | **Taras Shevchenko National University of Kyiv** | *Kyiv, Ukraine* |

Bachelor of Science in Physics (Optics, Photonics)

Basic physics: Mechanics, Optics, Electrodynamics, Quantum mechanics, Radioelectronics, Molecular physics, etc.
Basic mathematics: Mathematical analysis, Linear algebra, Analytical geometry, Differential equations, Theory of groups, Numerical methods, Theory of probability and statistics, Vector and tensor analysis, etc.
Optics & Photonics: Quantum Optics, Nonlinear Optics, Optics of anisotropic media, Quantum electronics, Technique of the optical spectroscopy, Photonics of organic media, Plasmonics, Raman spectroscopy, etc.

CERTIFICATES

July 2018 — **Artificial Intelligence Summer School** *Udine, Italy*
"From Deep Learning To Data Analytics"

July 2019 — **EEML Summer School by DeepMind** *Bucharest, Romania*
+ Award for Data Analysis and Visualization competition

AWARDS & HONORS

July 2019 — 2nd place in Kaggle challenge in Data Analysis organized by DeepMind (at EEML 2019).

July 2018 — Best Paper Award at AI-DLDA18 summer school.

2017 – 2019 — Erasmus+ scholarship funded by European Union.

2016 – 2019 — Scholarships/grants by University of Groningen, Vrije Universiteit Brussel, Friedrich Schiller University Jena, Charles University, AI-DLDA summer school, EEML summer school, Norwegian University of Science and Technology.

May 2016 — Grant of the Opportunity Funds program (funded by the USA Government).

2014, 2015 — Increased scholarship by Ukrainian Government for excellent academic performance.

2012 – 2013 — All-Ukrainian Research Paper Defense Competition among the Student-members of Minor Academy of Sciences of Ukraine; Scholarship and the Diploma of the Winner (regional stage).

2010 – 2013 (annually) — Ukrainian National Olympiad in Physics, the Diplomas of the Winner (national and regional stages).

PUBLICATIONS   Clickable!

TextCaps: a Dataset for Image Captioning with Reading Comprehension
Oleksii Sidorov, Ronghang Hu (UC Berkeley), Marcus Rohrbach (FAIR), Amanpreet Singh (FAIR)
ECCV 2020 (submitted)

Are all the frames equally important?
Oleksii Sidorov, Marius Pedersen, Nam Wook Kim (Harvard), Sumit Shekhar (Adobe Research)
CHI 2020, Late Breaking Works

Generative Smoke Removal
Oleksii Sidorov, Congcong Wang (NTNU), Faouzi Alaya Cheikh (NTNU)
NeurIPS 2019 Workshops, Proceedings of Machine Learning Research (PMLR) Journal

Craquelure As a Graph: Application of Image Processing and Graph Neural Networks to the Description of Fracture Patterns
Oleksii Sidorov, Jon Yngve Hardeberg (NTNU)
ICCV 2019 Workshops

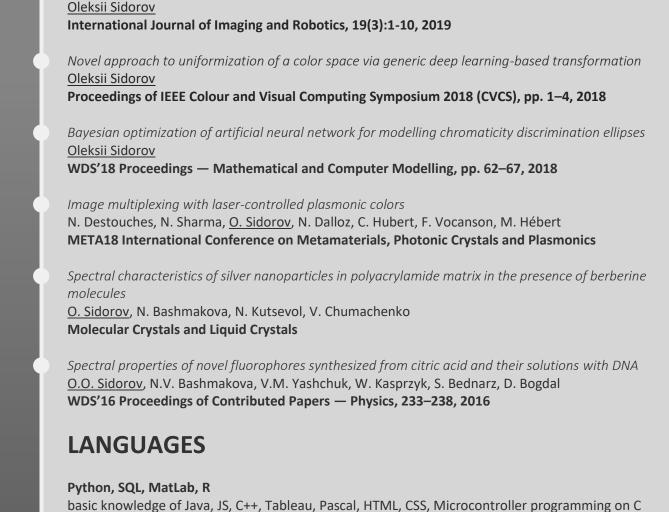*Deep Hyperspectral Prior: Denoising, Inpainting, Super-Resolution*
Oleksii Sidorov, Jon Yngve Hardeberg (NTNU)
ICCV 2019 Workshops

Conditional GANs for Multi-Illuminant Color Constancy: Revolution or Yet Another Approach?
Oleksii Sidorov
CVPR Workshops, 2019, p. 0-0

Changing the Image Memorability: From Basic Photo Editing to GANs
Oleksii Sidorov
CVPR Workshops, 2019, p. 0-0

Changes in the Visual Appearance of Polychrome Wood Caused by (Accelerated) Aging
Oleksii Sidorov, Jon Hardeberg, Sony George, Joshua Harvey (Oxford), Hannah Smithson (Oxford)
Electronic Imaging 2020, Material Appearance

Overt visual attention on rendered 3D objects
Oleksii Sidorov, Joshua Harvey (Oxford), Hannah Smithson (Oxford), Jon Hardeberg (NTNU)
In submission

Artificial color constancy via GoogleNet with angular loss function
Oleksii Sidorov
International Journal of Imaging and Robotics, 19(3):1-10, 2019

Novel approach to uniformization of a color space via generic deep learning-based transformation
Oleksii Sidorov
Proceedings of IEEE Colour and Visual Computing Symposium 2018 (CVCS), pp. 1–4, 2018

Bayesian optimization of artificial neural network for modelling chromaticity discrimination ellipses
Oleksii Sidorov
WDS'18 Proceedings — Mathematical and Computer Modelling, pp. 62–67, 2018

Image multiplexing with laser-controlled plasmonic colors
N. Destouches, N. Sharma, O. Sidorov, N. Dalloz, C. Hubert, F. Vocanson, M. Hébert
META18 International Conference on Metamaterials, Photonic Crystals and Plasmonics

Spectral characteristics of silver nanoparticles in polyacrylamide matrix in the presence of berberine molecules
O. Sidorov, N. Bashmakova, N. Kutsevol, V. Chumachenko
Molecular Crystals and Liquid Crystals

Spectral properties of novel fluorophores synthesized from citric acid and their solutions with DNA
O.O. Sidorov, N.V. Bashmakova, V.M. Yashchuk, W. Kasprzyk, S. Bednarz, D. Bogdal
WDS'16 Proceedings of Contributed Papers — Physics, 233–238, 2016

LANGUAGES

Python, SQL, MatLab, R
basic knowledge of Java, JS, C++, Tableau, Pascal, HTML, CSS, Microcontroller programming on C

English (fluent), Russian (native), Ukrainian (native)