

# Oleksandr Boiko

## Machine Learning Engineer

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boiko-oleksandr

alexanch

### Experience

- 02/2020 - Current **Machine Learning Engineer, Find For Me.**  
Paris, France
- Developed a client-server web app for visual search/match of luxury clothing alternatives from fast-fashion retailers using Python, Flask, and JavaScript.
  - Built ML pipeline to measure similarity of item embeddings generated by ResNets utilising Tensorflow, Keras.
  - Collected a dataset of 190k fashion items from online stores through distributed web-scraping.
  - Deployed app to production on Google Cloud Service, optimized ML system, and server configuration, resulting in a memory reduction by 40% and cost reduction by 30%.
- 01/2019 - 10/2019 **Machine Learning Researcher, SIB Labs, UEF, Finland.**  
Joensuu, Finland
- Created a deep learning-based pipeline in Python, Keras, and TensorFlow to segment disease areas from hyperspectral images of oral cavities reaching IoU segmentation score up to 0.92.
  - Developed a real-time data generator for hyperspectral image augmentation; image segmentation and visualization tools for hyperspectral images based on Mask R-CNN, Unet, Scikit-Learn, and cloud computing.
- 06/2018 - 08/2018 **Research Intern, Olympus Corp., Imaging Technology Dept.**  
Tokyo, Japan
- Applied deep learning algorithms for medical image segmentation, tuned and optimized the network's segmentation performance by 15% using Python and PyTorch.
  - Implemented an advanced medical image annotation pipeline using eye-tracking and speech recognition, evaluated the system's performance, speed, fatigue level in comparison to manual annotation.
- 07/2017 - 12/2017 **Industrial Project, Vilmorin France.**  
Saint-Etienne, France
- Built a system for the automatic detection of a color checker in a natural environment with 96% accuracy under uncontrolled light conditions in Matlab, awarded as the best-proposed solution.
  - Designed color correction algorithms applying polynomial regression and color space transformations to exclude the effect of the camera and illuminant; evaluated the color correction accuracy.

### Education

- 07/2017 - 07/2019 **MSc in Applied Computer Science | Erasmus+ Joint Master Degree COSI.**  
France, Spain, Finland
- Courses: machine/deep learning, computer vision, computer science, computational imaging, color science
- Erasmus+ Erasmus Mundus Joint Master Degree scholarship holder
- MSc Computer Science, Computational Colour and Spectral Imaging, University of Eastern Finland, Finland
  - MSc Optics, Image, Vision, Multimedia (Applied Computer Science), University Jean Monnet, France
  - MSc Color and Science in Industry (Applied Computer Science), University of Granada, Spain
- 07/2016 - 06/2018 **MSc in Applied Physics and Nanomaterials, Taras Shevchenko National University.**  
Kyiv, Ukraine
- Courses: applied physics, mathematics, computer science, data analysis
- 4.76 / 5.0 GPA, Diploma with Honours
- 05/2012 - 06/2016 **BSc in Applied Physics and Nanomaterials, Taras Shevchenko National University.**  
Kyiv, Ukraine
- Courses: applied physics, mathematics, computer science, data analysis, signal processing, statistics
- 2019 - 2020 **Online courses, Coursera.org, Fast.ai, Udacity.com.**
- Deep Learning, a 5-course specialization by deeplearning.ai: [ CNN | GAN | RNN | NLP(LSTM) | Ebeddings ]
- Relational Databases by Udacity [ SQL | MySQL | PostgreSQL | DB-API ]
- Data Structures and Algorithms by Google

### Skills

- Publications **Deep learning for Dental spectral image analysis**, 27th Color and Imaging Conference, 2019  
Awarded "CIC27 Best Student Paper First Runner-up" (among approx. 200 participants)
- Competitions AI-driven customer interactions by SAP [ NLP | AR | OpenCV ], Junction 2018, Helsinki  
2nd place for a Tech Race Hackaton by Junction 2018, Joensuu
- Technical skills **ML/DL: PyTorch, Keras, TensorFlow, FastAI, Scikit-Learn, OpenCV**  
**Dev: Python:** [ NumPy | Pandas | Matplotlib ], MATLAB, R; **Web:** [ JavaScript | HTML5 | CCS3 ]  
**Tools:** Git, SQL, Docker, Flask, Cloud Computing: [ Google App Engine | Heroku ]
- Languages English (fluent); French (basic); Ukrainian, Russian (native)