Oleksandr Boiko

Machine Learning Engineer
Resume w/ images: alexanch.github.io

Paris, France
☎ *+358 46 58 31 537*
✉ *alexboyko94@gmail.com*
alexanch.github.io/
boiko-oleksandr
alexanch

Experience

02/2020 - Current
Paris, France
4 months

Machine Learning Engineer, *Find For Me [click to see the demo]*.

- Developed a scalable client-server recommendation system 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 Platform, optimized ML system, and server configuration, resulting in a memory reduction by 40% and cost reduction by 30%.

01/2019 - 10/2019
Joensuu, Finland
10 months

Machine Learning Researcher, *SIB Labs, UEF, 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
Tokyo, Japan
3 months

Research Intern, *Olympus Corp., Imaging Technology Dept*.

- 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
Saint-Etienne, France
5 months

Industrial Project, *Vilmorin 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, improved color correction accuracy to 91% .

Education

07/2017 - 07/2019
France, Spain, Finland

MSc in Applied Computer Science | Erasmus+ Joint Master Degree COSI.

Courses: machine/deep learning, computer vision, computer science, computational imaging, color science
Erasmus+ Erasmus Mundus Joint Master Degree scholarship holder, (top 5% selected applicants)

- 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
Kyiv, Ukraine

MSc in Applied Physics and Nanomaterials, *Taras Shevchenko National University*.

Courses: applied physics, mathematics, computer science, data analysis
4.76 / 5.0 GPA, Diploma with Honours

05/2012 - 06/2016
Kyiv, Ukraine

BSc in Applied Physics and Nanomaterials, *Taras Shevchenko National University*.

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), Ebmeddings
Apache Spark by Udacity: Hadoop, HDFS, MapReduce, PySpark, Spark SQL/DataFrames, Spark ML

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 | HTLM5 | CCS3]
Tools: Git, SQL, Docker, Flask; Cloud: [GCP | AWS], Big Data: [Hadoop | Spark ML | Kafka]

Languages — English (fluent); French (basic); Ukrainian, Russian (native)