Leonid Shumilo

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Date of Birth	3 July 1997
Nationality	Ukrainian

EDUCATION

Sept 2014-July 2020

Bachelor and Master degree at the field of Applied Math
National Technical University of Ukraine "Igor Sykorsky Kyiv Polytechnic Institute"

Subjects: Programming, QA QC, Special sections of Programming, Special sections of computational mathematics, Algorithms and data structures, probability theory, mathematical statistics, theory of random processes, nonlinear dynamics, symmetric cryptology, asymmetric cryptology, complexity theory, control theory, discrete mathematics, mathematical analysis, methods of artificial intelligence, databases and information systems, mathematical modeling, data analysis, optimization methods and operations research, methods of reliability theory and risk.

INTERNSHIPS

Nov 2015 and Sept 2016

SPACE Research Institute NASU-SSAU, Ukraine
Website: http://www.ikd.kiev.ua/index.php?lang=ua

Programming and optimization of environment monitoring workflows, geospatial analysis performance using GIS.

EXPERIENCE

Oct 2016-to present

SPACE Research Institute NASU-SSAU ,Ukraine
Website: http://inform.ikd.kiev.ua/en/

Programmer Engineer (October 2016-Juky 2020)
Junior Scientific Fellow (since July 2020)
RESPONSIBILITIES:

1. Scientific research related to the agriculture and environmental monitoring based on the geographical principals, biophysical modeling, remote sensing and machine learning/deep learning (crop type mapping, forestry monitoring, land degradation monitoring)
2. Development of workflows (Data processing, intelligent products producing) based on Remote Sensing, in-situ, modeling data and workflows implementation using Cloud Technologies (Amazon AWS, Google Earth Engine, VLab).
3. In-situ measurements (Leaf Area Index, Air Quality pollutants, Land Surface Temperature).
4. Ground truth data collection and labeling for tasks of crop type and land cover classification, deforestation detection.
5. Projects leader and projects responsible executor.

PROJECTS PARTICIPATION:

1. ***GEOEssential***: GEOEssential Variables workflows for resource efficiency and environmental management, http://www.geoessential.eu/
2. ***SMURBS***: Smart Urban Solutions to air quality, disasters and city growth, https://smurbs.eu/
3. ***IGOSP***: Integrated Global Observing Systems for Persistent Pollutants, http://www.igosp.eu/

4. ***INTELLECT***: Intelligent technologies for satellite monitoring of environment based on deep learning and cloud computing, https://www.researchgate.net/project/Intelligent-technologies-for-satellite-monitoring-of-environment-based-on-deep-learning-and-cloud-computing-InTeLLeCT
5. ***Methodology for SDGs indicators assessment***: GEO-AMAZON EARTH OBSERVATION CLOUD CREDITS PROGRAMME, https://www.earthobservations.org/article.php?id=362
6. ***Deep Learning Methods for Land Cover and Land Use Classification:*** GEO-GOOGLE CLOUD CREDITS PROGRAMME, https://earthobservations.org/article.php?id=447
7. ***National Research Foundation of Ukraine:*** *Deep learning methods and models for applied problems of satellite monitoring*
8. ***National Research Foundation of Ukraine:*** *Information technology for fire danger assessment and fire monitoring in natural ecosystems based on satellite data*
9. ***Deep Green Ukraine:*** Open Data Challenge winner
10. ***Service for SDG 2.4.1 and 15.3.1 indicators:*** e-shape (https://e-shape.eu/) showcase

Mar. 2017 – Sep. 2020 ***EOS Data Analytics,*** *Ukraine*
Website: https://eos.com/

Python Developer, Data analyst:
RESPONSIBILITIES:
1. Geospatial Data analysis
2. Development of machine learning and deep learning satellite data processing approaches for the agricultural monitoring
3. Implementation of machine learning and deep learning workflows in the Amazon cloud environment
4. Crop mapping and in-situ data collection

PROJECTS PARTICIPATION:
1. The World Bank and EU program “Supporting Transparent Land Governance in Ukraine”
2. Noosphere Engineering School mentorship

Sept. 2020-to present ***National Technical University of Ukraine “Igor Sykorsky Kyiv Polytechnic Institute”****, Ukraine*
Website: https://kpi.ua/en

Graduate Teaching Assistant
RESPONSIBILITIES:
1. Help for professors conduct lab, study groups, grade papers and prepare lectures for the “Special Sections of Programming” and “Machine Learning Methods” subjects.
2. Scientific research related to the land degradation and SDG indicators assessment
3. Responsible executor of National Research Foundation of Ukraine projects.

PROJECTS PARTICIPATION:
1. ***National Research Foundation of Ukraine:*** *Intelligent models and methods for determining land degradation indicators based on satellite data*

PROFESSIONAL SOCIETY/COMMUNITY MEMBERSHIP

2018 - to present ***IEEE Society***

2018 – to present ***IEEE Geoscience & Remote Sensing Society***

2018, 2020 ***American Geophysical Union (AGU)***

SERVICES

2021 - to present	***Reviewer in the Remote Sensing of Environment journal (Elsevier)***
2021	***Scientific Committee (as a reviewer) IEEE EUROCON 2021 conference***
2020	***Scientific Committee (as a reviewer) IEEE IDAACS 2020 conference***
2020	***Scientific Committee (as a reviewer) IEEE Elnano 2020 conference***

TRAINING COURSES

Oct 2020	***EO Data Science training course Google Earth Engine Foundations*** Training on the use of Google Earth Engine Platform for data science and remote sensing applications
May 2018	***Training on measuring SENDAI Indicators Remote Sensing and In-situ Data*** Training is organized by UN-SPIDER for researchers to use R, satellite data and in-situ data to estimate yield and SENDAI Indicator.
July 2019	***NASA ARSET: Advanced Webinar: Remote Sensing for Monitoring Land Degradation and Sustainable Cities SDGs*** NASA ARSET training on SDG indicators 11.3.1 and 15.3.1 estimation using remote sensing data and GIS.
Apr 2012	**Cisco IT Essentials** Course gave me knowledge and skills in the field of information and communication technologies (entry-level specialist).
May 2013	***Cisco CCNA Exploration: Network Fundamentals*** Course gave me theoretical knowledge and skills in Network technologies, configure computers, network hardware, good communication skills and professional behavior while working with customers.

OTHER

- **Languages**: Ukrainian and Russian (native speaker), English (fluent).
- **Social Skills**: Strong numerical and analytical skills; good organizational, planning, time-management and multi-tasking skills; communication skills; responsible, goal-oriented, team-player, stress-resistant, creative, self-motivated.

Striving for continuous professional development and acquiring new knowledge and skills.

- **Hobbies**: theatre, guitar, music, reading.
