BUO ISAAC NEWTON KWASI

(Tel) +37256773476. buonewton80@gmail.com. Narva mnt 27-602, 51009 Tartu,Estonia

PROFESSIONAL SUMMARY

Effective project leader and problem-solver with excellent spatial analysis skills and a hardworking mentality. Seeking to apply my expertise and extensive experience in geoinformatics in a challenging new role with a growing research and development team.

WORK HISTORY

October 2021 – Current
Tartu, Estonia

Junior Researcher / University of Tartu
- Conduct research for extreme heat events and urban thermal comfort-related projects
- Instructor for spatial data studio course for MSc Geoinformatics curricular
- Assist in teaching spatial database course

June 2019 - September 2019
Tallinn, Estonia

Verification Specialist / Veriff OÜ
- Verified the identities based on photos and videos based on specified guidelines
- Performed research associated with improving online identity verification
- Worked on projects to improve online verification tools

Mar 2018 - December 2018
Tartu, Estonia

Part-time GIS Specialist on German Fibre Project / Regio Ltd.
- Developed a python program with arcpy for automatic generation of trenches for a fiber-optic network
- Visually inspected and validated street centrelines
- Corrected automatically generated trenches

Jan 2015 - Aug 2017
Accra, Ghana

Geoinformation Systems Officer / Joeamah Geomatics Consult
- Managed and planned data collection for Electricity Company (ECG) of Ghana Asset Mapping Project
- Represented the firm in discussions and reviews regarding completed phases of the ECG Asset Mapping Project
- Designed topographic profiles for West Africa Power Project transmission towers
- Created a database for the implementation of a Land Information System for Social Security and National Insurance Trust staff proprieties

Sep 2013 - Aug 2014
Tarkwa, Ghana

Teaching Assistant / University of Mines and Technology
- Served as an interim GIS laboratory technician and organized tutorials
- Assisted lecturers in preparing course materials and conducting research
- Supervised students' practical laboratory work and fieldwork
- Assisted in the coordination and organization of field trips for students

EDUCATION

Sep 2019 - Current Tartu, Estonia	**Ph.D. Geoinformatics** University of Tartu Focus on geospatial data management, remote sensing data science, GIS programming, and application of remote sensing in urban climate research.
Sep 2021 – July 2022 Tempe, Arizona, USA	**Visiting Research Scholar** Arizona State University (ASU) High-resolution shade distribution and mean radiant temperature modeling for large urban areas using big-geospatial data.
Sep 2017 - June 2019 Tartu, Estonia Salzburg, Austria	**Master of Science in Geoinformatics for Urbanised Societies** University of Tartu/University of Salzburg Focus on geospatial data management, GIS programming, and application of remote sensing in urban climate studies.
Aug 2009 - May 2013 Tarkwa, Ghana	**Bachelor of Science in Geomatic Engineering** University of Mines and Technology Focus on GIS, remote sensing, cartography, photogrammetry, engineering, and mining surveys.

AWARDS AND LEADERSHIP

- Dora Plus mobility grant for doctoral studies,2021-2022
- Dora Plus short-term mobility grant: Discrete Anisotropic Radiative Transfer (DART) Training at Paul Sabatier University, Toulouse, France, June 2020.
- 2nd Runner-up and Global nominee, NASA Space Apps Challenge, Tartu, September 2019.
- FIG-Young Surveyors Network Travel Fund for AfricaGEO 2014 Conference, awarded by Conference of South African Surveyors (CONSAS), July 2014.
- Vice-President Geomatic Engineering Students Association (GESA). UMaT- Tarkwa, Aug 2012 - May 2013.

AFFILIATIONS

- Member- European Geosciences Union, 2021 to Current.
- Member- International Society of Biometeorology, 2021 to Current.
- Member - International Association for Urban Climate, 2019 to Current.
- Trainee Professional Member- Ghana Institute of Surveyors, 2015 to Current.

PROJECTS

- LLTOM19649-Distribution and trend of the extent of heat islands in Tallinn in 2014 - 2018.

PUBLICATIONS

- Buo Isaac; Sagris Valentina; Jaagus Jaak (2021), Generating synthetic daily NDVI and LST products suitable for urban scale SUHI and heatwaves assessment [Accepted for publication in International Journal of Environmental Science and Technology]
- Buo Isaac; Sagris Valentina; Jaagus Jaak (2021), Gap filling Satellite Land Surface Temperature Over Heatwave Periods with Machine Learning, IEEE Geosci. Remote Sens. Lett. 10.1109/LGRS.2021.3068069.
- Buo Isaac; Sagris Valentina; Burdun Iuliia; Uuemaa Evelyn (2020), Estimating the expansion of urban areas and urban heat islands (UHI) in Ghana: a case study, Natural Hazards. 10.1007 / s11069-020-04355-4

ABSTRACTS

- Isaac Buo; Valentina Sagris; Jaak Jaagus (2021), Application of machine learning as a gap-filling tool for satellite land surface temperature (No. EGU21-8746). Copernicus Meetings.

POSTER PRESENTATIONS

- Isaac Buo; Valentina Sagris; Jaak Jaagus; Ariane Middel (2022), Extensive validation of SOLWEIG for regional-scale thermal exposure mapping in Phoenix, Arizona, USA, IAUC Virtual Poster Session
- Isaac Buo; Valentina Sagris; Jaak Jaagus; Ariane Middel (2022), High-Resolution Shade and Sky View Factor Maps from LiDAR for Cool Corridor Planning, CAP LTER Symposia, Scottsdale-Arizona, USA
- Isaac Buo; Valentina Sagris; Jaak Jaagus (2021), A machine learning approach to generate daily synthetic NDVI and LST products for urban scale SUHI and heatwaves assessment, UCRC Poster Event 2021, ASU, Tempe-Arizona, USA.
- Isaac Buo (2019), Remote sensing applications in studying urban microclimate, Baltic Earth Summer School, Võru, Estonia.

WORKSHOPS

- Isaac Buo (2022), Image Classification, University of Tartu UAV Summer School 2022, Tartu, Estonia.
- Alexander Kmoch; Evelyn Uuemaa; Holger Virro; Isaac Buo (2021), Satellite image processing using Python programming, https://github.com/LandscapeGeoinformatics/EGU_2021_lgeo_workshops