

## **FREDRICK ARTHUR ONYANGO**

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### **EDUCATION**

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#### **TECHNICAL UNIVERSITY OF MUNICH**

**PhD student in Livestock Systems**

**Freising, Germany**

**November 2024 - present**

#### **UNIVERSITY OF TWENTE**

**Master of Science in Geoinformation Science and Earth Observation**

**Enschede, the Netherlands**

**September 2015 - March 2017**

#### **UNIVERSITY OF NAIROBI**

**Bachelor of Science (BSc) in Geospatial Engineering**

**Nairobi, Kenya**

**October 2007 – August 2012**

### **PROFESSIONAL EXPERIENCE**

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#### **TECHNICAL UNIVERSITY OF KENYA**

***Tutorial Fellow***

**Nairobi, Kenya**

**March 2017 – October 2024**

- Developing and delivering lectures in Digital Photogrammetry, Remote Sensing, etc., to a cumulative total of 1,300+ students resulting in a 10% increase in student attendance and participation
- Implemented innovative teaching methods, such as flipped classrooms and active learning, leading to a 15% improvement in student comprehension and retention
- Supervised 20+ final year student projects leading to grades of 70% and above
- Worked in a team of 3 to collect UAV multispectral image data for PhD research leading to co-authoring and publication of a research paper
- Contributed to preparing and writing 2 research grant applications worth a cumulative total of \$53K, providing critical input and expertise

#### **KISUMU WATER & SANITATION COMPANY**

***GIS Analyst***

**Kisumu, Kenya**

**September 2013 – August 2015**

- Conceptualized, designed and implemented a comprehensive geodatabase that captured spatial and non-spatial attributes of the company's water and sanitation assets, resulting in a time reduction of 40% in asset-related data requests
- Produced detailed maps and cartographic products for water infrastructure projects, enhancing project visualization and communication
- Performed spatial analysis to identify optimal locations for new water facilities, resulting in accurate designs for new connections thus an increase in service provision by 15%
- Trained 20 GIS technicians on a critical Customer Identification Survey mapping project, resulting in accurately mapping 20,000+ customers within 1 month

#### **GEOMAPS AFRICA**

***Geomatics Engineer***

**Nairobi, Kenya**

**July 2012 – August 2013**

- Designed aerial survey flight plans, for aerial surveying mapping projects
- Proficiently processed 10,000+ aerial images and LiDAR to generate photogrammetric products
- Collaborated with the geodetic team to establish control networks for surveying projects; performed static and RTK observations with GNSS equipment; and conducted precise leveling for vertical height acquisition in project areas
- Coached 100 data enumerators in map reading and GPS data collection, leading to the successful mapping of 200,000+ customers for Nairobi Water & Sewerage Company's Customer Identification Survey

### **ADDITIONAL INFORMATION**

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Licensed Drone Pilot by the Kenya Civil Aviation Authority