

# THOMAS MUMUNI BILINTOH

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## PROFESSIONAL SUMMARY

Thomas Mumuni Bilintoh is a Ph.D. student at the Geography Department at Clark University. Bilintoh creates quantitative methods that contribute to Geographic Information Science (GIS) and Remote Sensing. He is currently developing methods to quantify the dynamics of land categories.

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## EDUCATION

### Doctor of Philosophy

*Clark University, Graduate School of Geography*

Concentration: GIS and Remote Sensing

Worcester, Massachusetts, USA

August 2019 – Present

### Master of Science

*Michigan State University, College of Social Sciences*

Major: Geography

GPA: 3.81/4.00

East Lansing, Michigan, USA

August 2017 – May 2019

### Bachelor of Science (First Class honors)

*University of Mines & Technology*

Major: Geomatic Engineering

GPA: 3.99/4.00

Tarkwa, Ghana

April 2008 – April 2012

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## PROFESSIONAL EXPERIENCE

### Research Assistant

*Plum Island Ecosystem*

I create maps and methods to quantify marsh dynamics in three LTER network sites:

1. Plum Island Ecosystems
2. Georgia Coastal Ecosystems
3. Virginia Coast Reserve

Clark University, USA

August 2019 – Present

### Research Assistant

*Java Atlas Project*

I created over 300 maps with Adobe Illustrator and ArcGIS data driven pages for:

1. Population density
2. Slope
3. Digital Terrain Models

MSU, USA

2018 – 2019

### Managing Director

*Geo-Bilt Engineering Consult*

1. Negotiating for contracts.
2. Supervising execution of awarded contracts.
3. Carrying out Cadastral Surveys.
4. Carrying out Aerial Surveys.
5. Carrying out Hydrographical Surveys.
6. Carrying out Engineering Surveys.
7. Cartography.

Accra, Ghana

2014 – 2018

**Volunteer Intern***RS & GIS, Michigan State University*East Lansing, Michigan  
December 18<sup>th</sup> – January 3<sup>rd</sup> 2018

My responsibilities were:

1. Sorting LiDAR data.
2. Developing a model in ArcGIS model builder to create LAS datasets.
3. Developing a model in ArcGIS model builder to compute NDVI from LAS datasets.
4. Developing a model in ArcGIS model builder to create separate vegetation above 3 m from all other LAS datasets.

**Geomatic Engineer***Hive Properties Limited*Accra, Ghana  
January 2013 – July 2014

My responsibilities were:

1. Creating planning schemes.
2. Carrying out Cadastral Surveys.
3. Carrying out Aerial Surveys.
4. Carrying out Hydrographical Surveys.
5. Carrying out Engineering Surveys.

**Assistant Surveyor***State Housing Company Limited*Accra, Ghana  
October 2012 – November 2013

My responsibilities were:

1. Carrying out Cadastral Surveys.
2. Creating cadastral plans.
3. Submitting cadastral plans for approval.
4. Carrying out Engineering Surveys.

**Pupil Teacher***Fachi 'Little Flower' School Complex*Tamale, Ghana  
2006 – 2007

My responsibilities were:

1. Teaching Mathematics.
2. Teaching Information and Communication Technologies.
3. Teaching Music & Dance.
4. Preparing lesson materials.

**PUBLICATION AS PEER REVIEWED JOURNAL ARTICLE**

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1. Schaetzl, Randall J. Baish, Christopher, Patrick M. Colgan, Jarrod Knauff, **Thomas Bilintoh**, Dan Wanyama, Michelle Church, McKeethan Kevin, Albert Fulton, and Alan Arbogast. "Variations in Till Texture and Clay Mineralogy of the Saginaw Lobe (Michigan, USA): Evidence for a Sediment-Mixing Process-Model of Till Genesis." *Quaternary Research*, 11.
  2. **Bilintoh, Thomas Mumuni**, and Eric Stemn. 2015. "Municipal Solid Waste Landfill Site Selection in the Sekondi-Takoradi Metropolis of Ghana Using Fuzzy Logic in a GIS Environment." *Journal of Environment and Waste Management* 2:071–078.

**PRESENTER AT CONFERENCES**

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1. 2021 Norbet Psuty Paper Competition (Virtual). **A Generalized Method to Quantify the Dynamics of a Specific Category to Compare Sites**. American Association of Geographers (AAG).
  2. 2021 Light talk presentation (Virtual). **Methods to compare cases concerning categorical transitions during various time intervals**. Plum Island Ecosystem All-Scientists Meeting, Massachusetts, USA.
  3. 2020 Poster presentation (Virtual). **Methods to compare cases concerning categorical transitions during various time intervals**. American Association of Geographers (AAG), Colorado-Denver, USA.
  4. 2019 Poster presentation. **Component intensities to relate difference by category with difference overall**. Plum Island Ecological site review, Amesbury-MA, USA.
  5. 2019 Oral presentation. **Assessing Validity of Famers' Response to Armyworm Infestation in Ejura, Ghana: A Statistical and Remote Sensing Approach**, Washington DC, USA.
  6. 2018 Oral presentation. **Comparative Analysis of Vegetation Index from Sequoia and RedEdge Multispectral**

**Cameras.** American Society for Photogrammetry and Remote Sensing (ASPRS), Ann Arbor, USA.

7. 2018 Oral presentation. **The Role of Unmanned Aerial Vehicle (UAV-Drone) Technology in Agriculture.** Council for Scientific & Industrial Research (CSIR), Ejura, Ghana.
8. 2018 oral presentation. **Efficient Nonstationary Auto-correlated Field Simulation Using Convolution Filtering.** Spatial Accuracy, Beijing, China.

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### REVIEWER FOR PROFESSIONAL SCIENTIFIC JOURNALS

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1. 2021 Bulletin of Geography. Socio-economic series
2. 2021 NS Applied Journal
3. 2020 NS Applied Journal
4. 2020 Journal of Geographical Information Systems
5. 2020 Heliyon
6. 2019 Journal of Geography and Regional Planning (twice)
7. 2019 Journal of Geography and Regional Planning (twice)

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### TECHNICAL SKILLS & COMPETENCIES

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#### Advanced

8. Collecting geospatial data with Unmanned Aerial Vehicle (UAV) or drones
9. Collecting geospatial data with Real Time Kinematic (RTK) Global Positioning Systems (GPS)
10. Collecting geospatial data with Total Stations
11. Pix4D mapper

#### Intermediate

1. R Programming Language
2. Python Programming Language
3. Google Earth Engine
4. ArcGIS Desktop Suite
5. TerrSet
6. ERDAS Imagine
7. GNSS Solution
8. QGIS
9. GRASS GIS
10. Autodesk Civil 3D Suite
11. Microsoft Office Suite

#### Beginner

1. ENVI
2. Geomatica
3. Visual Basic Dot Net

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### GRANTS & SCHOLARSHIPS

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1. 2020 \$8,350 The Edna Bailey Sussman Fund for summer research
2. 2020 \$200 Remote Sensing Specialty Group 2nd place Guided Poster Competition, AAG 2020
3. 2018 \$11,450 from the MasterCard Foundation and Michigan State University for my Master's Thesis field work
4. 2018 \$300. Travel Award from the Geography Department of Michigan State University, USA.
5. 2017-2018 \$150,000 Full Scholarship from the MasterCard Foundation to pursue a masters degree in Geography at Michigan State University, USA.

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### COPETITION WARDS

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1. Second place in 2021 AAG's Norbet Psuty Paper Competition (Virtual).
2. Second place in 2020 AAG's Spatial Analysis and Modeling Poster Competition (Virtual).

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### PROFESSIONAL ORGANIZATION AFFILIATION

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6. 2018-present. American Association of Geographers (AAG)
7. 2016-present. Ghana Institute of Surveyors (GHiS)
8. 2012-present. Institution of Black Engineers (IBE)

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### LEADERSHIP

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2013-PRESENT. Vice President of SMART GHANA FOUNDATION: A non -profit organization that seeks to educate people from the northern parts of Ghana, on the opportunities and significance of education.

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### REFEREES

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Dr. Robert Gilmore Pontius Jr.  
Professor Graduate School of Geography Clark  
University  
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Dr. Ashton Shortridge  
Professor and Director of the Social Science Data Analytics Initiative at Michigan State University Department  
of Geography, Environment, and Spatial Sciences  
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Dr. Raechel White  
Department of Geography, Environment, and Spatial Sciences, Michigan  
State University.  
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Dr. Michael Goodchild (Pioneer of GIScience)  
Emeritus Professor of Geography at the University of California, Santa Barbara. Tel:  
+1(805) 455 6529  
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Robert Goodwin  
Senior Geospatial Analyst/Project Manager, RS&GIS, Michigan State University  
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