

CURRICULUM VITAE

DANIEL EMAASIT

PERSONAL INFORMATION

Last Name: Emaasit

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EDUCATION BACKGROUND

Doctor of Philosophy in Civil and Transportation Engineering (Expected in August, 2016)

University of Nevada, Las Vegas, NV, USA. (2013-Present)

Dissertation: *Development of an Enterprise GIS Database for Utilities within the Right-of-Way of Roadways Maintained by the Nevada Department of Transportation.*

Masters of Engineering in Civil and Transportation Engineering (Awarded in August, 2013)

Tennessee State University, Nashville, TN, USA. (2011-2013)

Thesis Title: *Framework to Identify Factors Associated with High Pedestrian and Bicycle Crash Locations Using Geographic Information System and Statistical Analysis.*

Bachelor of Science in Civil and Transportation Engineering (Honors). (Awarded in Nov, 2010)

University of Dar Es Salaam, Tanzania. (2006-2010)

Capstone: *Laboratory study on the suitability of Cement Kiln Dust and Non-Conforming Clinker for upgrading of the Engineering properties of laterite soils.*

CAREER EXPERIENCE

Graduate Research Assistant, University of Nevada-Las Vegas (August, 2013 – Present)

Project 1: *Utility Data Layer.*

Sponsor: Nevada Department of Transportation (NDOT)

Tasks;

- Literature review, data collection and data analysis
- Creation of a data library and an inventory

Project 2: *Business Intelligence for Nevada Department of Transportation.*

Sponsor: Nevada Department of Transportation (NDOT)

Tasks;

- Literature review of Bridge Management Systems (BMS)
- Bridge data collection, understanding and preparation
- Analysis of bridge data for anomalies and inconsistencies

Graduate Research and Teaching Assistant, Tennessee State University (August, 2011 – July, 2013)

Project 1: *Safety Effectiveness Evaluation of Median Cable Barriers in Tennessee.*

Sponsor: Tennessee Department of Transportation (TDOT)

Tasks;

- Data collection including crash data, geometric data of road segments with median cable barriers, properties of median cables used in Tennessee.
- Reviewing of hard copy crash reports to identify median related crashes.
- Descriptive statistical analysis of before and after performance of the cable systems.
- Empirical Bayes analysis of the before and after performance of the cable systems.

Project 2: *Statewide Pedestrian and Bicycle Safety Analysis and Investment Policy.*

Sponsor: Tennessee Department of Transportation (TDOT)

Collaboration: With University of Tennessee Knoxville

Tasks;

- Data collection including pedestrian and bicyclist crash data, geospatial data of census tracts in Tennessee, socio-economic and demographic data of Tennessee.
- Geocoding of crash data and Identification of high crash location using GIS spatial statistical tools.
- Descriptive Statistical analysis of crash data.
- Applying statistical models such as Multinomial Logit and Negative Binomial models to perform Injury Severity and Frequency analysis of the crash data.

Teaching Assistant/Courses Taught

- CVEN 3131 Soil Mechanics Lab
- CVEN 3200 Transportation Engineering
- CVEN 4090 Traffic Engineering
- CVEN 4320 Highway Engineering

Research Assistant, University of Dar Es Salaam (August, 2010 – June, 2011)

Project: *Geotechnical Properties of Two-Stage Stabilized Expansive Soils with Lime and Cement.*

Tasks;

- Performing soil tests such as Atterberg limits, sieve analysis, Modified Proctor test, Unconfined Compressive Strength.

Highway Engineering Intern, SMEC International Pty, (Australian Consulting firm, Tanzania office) (July, 2009 – October, 2009)

Project: *Preparation of preliminary and detailed Road engineering designs, cost estimates, bidding documents, and environmental and social impact assessments for the investment sub-projects for Dodoma municipality under the Tanzania strategic cities project.*

Tasks;

- Geometric design of roads using AutoCAD Civil 3D 2010.
- Preparation of preliminary cost estimates for the roads.

Civil Engineering Materials Intern, Central Materials Laboratory (CML) Ministry of Works and Transport, Uganda (July 2008 – October 2008).

Tasks: *Testing construction materials from contractors, performing soil tests, Atterberg limits, Proctor, Sieve analysis.*

Water Resources Engineering Intern, M & E Associates Ltd Consulting Engineers, Uganda (July, 2007 – October, 2007)

Project: *Rehabilitation and construction of water and sanitation facilities in Soroti, Sironko and Kaberamaido districts in Uganda.*

RESEARCH

Publications

1. **Emaasit, D.**, Chimba, D., Allen, S., Hurst, B., Nelson, M. "Factors affecting Median Cable Barrier Crash Frequency: New Insights". *Journal of Transportation Safety and Security*, Vol. 6 No. 1, 2014, pp. 62-77. doi:10.1080/19439962.2013.812168.
2. D. Chimba, **D. Emaasit** and B. Kutela, "Integrating Origin-Destination Survey and Stochastic User Equilibrium: A Case Study for Route Relocation," *Journal of Transportation Technologies*, Vol. 2 No. 4, 2012, pp. 297-304. doi: 10.4236/jtts.2012.24032.
3. D. Chimba, **D. Emaasit** and B. Kutela, "Likelihood Parameterization of Bicycle Crash Injury Severities," *Journal of Transportation Technologies*, Vol. 2 No. 3, 2012, pp. 213-219. doi: 10.4236/jtts.2012.23023.
4. Paz, A., E. Yfantis, **D. Emaasit**, M. Branchini, M. McElrath, A. Batoumi, A. Fouche, and E. Regnault. "Development of Tools for the Management of Utility Infrastructure". *Transportation Research Board*, Washington, D.C. In Press, 2014.
5. Paz, A., E. Yfantis, **D. Emaasit**, and M. Branchini. "A Workflow Process for the Management of Utility Infrastructure within the Right of Way of Roadways". *Transportation Research Board*, Washington, D.C. In Press, 2014.
6. Chimba, D., E. Ruhazwe, **D. Emaasit**, B. Hurst and M. Tugwell, "Median Cable Rails Systems Effectiveness supported by Numbers," *Transportation Research Board*, Washington, D.C. In Press, 2014.

Conference Presentations

1. **Emaasit, D.**, Chimba, D., Cherry, C., Pannell, Z. "Patterning Demographic and Socioeconomic Characteristics Affecting Pedestrian and Bicycle Crash Frequency". Accepted for presentation at the *Transportation Research Board 93rd Annual Meeting*, (TRB), Washington, D.C., January 14th, 2014.
2. **Emaasit, D.**, Chimba, D., Cherry, C., Kutela, B., Wilson, J. "Methodology to Identify Factors Associated with Pedestrian High-Crash Clusters Using GIS-Based Local Spatial

Autocorrelation". Accepted for presentation at the *Transportation Research Board 92nd Annual Meeting, (TRB)*, Washington, D.C., January 15th, 2013.

3. Chimba, D., **Emaasit, D.**, Allen, S., Hurst, B., Nelson, M. "Safety-Effectiveness Evaluation of Cable Rail Systems in Tennessee". Accepted for presentation at the *Transportation Research Board 92nd Annual Meeting, (TRB)*, Washington, D.C., January 16th, 2013.
4. Chimba, D., Kutela, B., **Emaasit, D.**, Ogletree, G., Horne, F., Hallavant, R. "Impact of Abandoned and Disabled Vehicles on Freeway Incident Durations". Accepted for presentation at the *Transportation Research Board 92nd Annual Meeting, (TRB)*, Washington, D.C., January 14th, 2013.
5. Chimba, D., **Emaasit, D.** "Safety-Effectiveness Evaluation of Cable Rail Systems in Tennessee". Presented at the 34th Annual Tennessee State University-Wide Research Symposium, Nashville, March 26, 2012.
6. Bujulu, P. M. S. and **Emaasit, D.** (2010) "Suitability of Cement Kiln Dust and Non-Conforming Clinker for Upgrading the Engineering Properties of Laterite Soils", 3rd Seminar on Infrastructure Technologies for Sustainable Development: JSPSAA Science Platform Program, 17th September, 2010, Kyoto, Japan.

Other Conferences attended

1. The 91st Annual Meeting of the Transportation Research Board (TRB), Washington, D.C., January 22-26, 2012.
2. Annual Meeting of the Intelligent Transportation Society of Tennessee (ITS), Memphis, Tennessee, September 28-30, 2011.
3. Regional Conference on Innovations in Road Financing and Management organized by the Tanzania Roads Fund Board (TRFB), Arusha, Tanzania, August 26-27, 2010.

COMPUTER SKILLS

1. RDBMS: MS SQL Server, Oracle DB, & MySQL
2. NoSQL: MongoDB
3. Statistics: R, STATA & SPSS.
4. Programming: Python
5. Version Control: Git
6. Business Intelligence: Teradata, RapidMiner, Tableau, Planner's Lab, & Splunk
7. Planning: ArcGIS, TransCAD & MS Project.
8. Highway Design: Micro Station & AutoCAD Civil 3D.
9. Traffic Analysis: HCS & Synchro.
10. Microsoft Office: Word, Excel, Publisher, PowerPoint & Outlook.

CERTIFICATIONS

1. The Data Scientist's Toolbox: Coursera Verified Certificates, License GLPM45CD33
2. Getting and Cleaning Data: Coursera Verified Certificates, License 6B3KYARGWP
3. Exploratory Data Analysis: Coursera Verified Certificates, License BSRB3GNZR8

AWARDS AND SCHOLARSHIPS

1. Graduate Research Assistantship, University of Nevada-Las Vegas (2013-2016)
2. Certificate for Best Graduate Poster Presentation in the Category of Engineering, 35th Annual Tennessee State University-Wide Research Symposium, Nashville, April 1-5, 2013.
3. Certificate for Excellent Academic Performance from the Golden Key International Honor Society, Tennessee State University. (Awarded on December 6, 2012)
4. Graduate Research and Teaching Assistantship, Tennessee State University (2011-2013)
5. Certificate for Excellent Performance for being the Best Final year student in Civil and Transportation Engineering, University of Dar Es salaam. (Awarded in November, 2010)
6. Certificate for Excellent Performance for being the Best First year student in Civil and Transportation Engineering during the 2006/2007 Academic year, University of Dar Es salaam (Awarded in November 2007)
7. Exchange Student scholarship from the Inter-University Council for East Africa to pursue B.Sc. in Civil Engineering at the University of Dar Es salaam (2006-2010)

MEMBERSHIP IN PROFESSIONAL SOCIETIES

1. American Statistical Association (2014-Present)
2. Professional Association for SQL Server (2014-Present)
3. Intelligent Transportation Society of America (2014-Present)
4. Golden Key International Honor Society (2012-Present)
5. Institute of Transportation Engineers (2011 – Present)
6. American Society of Civil Engineers (2011 – Present)
7. Institution of Engineers in Tanzania (2007 – Present)

VOLUNTEER EXPERIENCE

1. Organizer, Las Vegas R Users Group (2014-Present)
2. Reviewer, Journal of Transportation Research Board (2014-Present)
3. Reviewer, Journal of Traffic Injury Prevention (2014-Present)

LEADERSHIP EXPERIENCE

1. Founder & Organizer: Las Vegas R Users Group, Las Vegas, Nevada (2014-Present)
2. Secretary & Founding Member: Institute of Transportation Engineers (ITE)-Tennessee State University Chapter (2011 – 2013)
3. Member of the Board of Directors of Miroi Junior Primary School, Bukedea, Uganda (2010-Present)
4. General Secretary: Rotaract Club of Kwanza, University of Dar Es Salaam (2008 – 2009)
5. General Secretary: Kachumbala Cooperative Society, Bukedea, Uganda (2007 – Present)

REFEREES

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