

Omar Albatayneh, Ph.D., E.I.T

Possess: U.S work authorization

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Laramie, Wyoming

SUMMARY

Omar Albatayneh holds a Ph.D. in transportation engineering from the University of Wyoming. His areas of expertise include transportation asset management, pavement design and analysis, and transportation data science.

Specialties & Skills: Python, ArcGIS, SQL, AutoCAD Civil 3D, MATLAB, R-Studio, SPSS, JAVA, Optimization, and TensorFlow.

EDUCATION

- Ph.D. Transportation Engineering April, 2020
University of Wyoming Laramie, Wyoming
- M.S. Transportation Engineering 2017
- B.S. Civil Engineering 2015
Jordan University of Science and Technology Irbid, Jordan

EXPERIENCE

University of Wyoming, Department of Civil & Architectural Engineering Laramie, Wyoming
Postdoctoral Scholar Research Associate April 2020 -Present

- Take responsibility for planning and developing research methods and techniques within the framework of the research program
- Provide guidance and support to any students associated with the project

University of Wyoming, Department of Civil & Architectural Engineering Laramie, Wyoming
Teaching Assistant January 2018 - April 2020

Worked as graduate teaching assistant at UYWO. Performed all assistant teaching duties, including mentoring, lecturing, researching, and clerical help for the following courses:

- Pavement Materials
- Pavement Design
- Pavement Management System

University of Wyoming, Department of Civil & Architectural Engineering Laramie, Wyoming
Research Assistant January 2018 - April 2020

- Solving real data problems with data science and machine learning.
- Develop optimization algorithm using the Genetic Algorithm and 0/1 Knapsack Problem.
- Conduct literature searches, help in conducting quantitative analytical processes of data using ArcGIS and Excel.
- Assist PhD candidates in data analysis, GIS analysis and statistical investigation.

Jordan University of Science and Technology Irbid, Jordan
Teaching Assistant January 2016- August 2017

Provide in-depth knowledge on subjects already taught by the class instructor for the following courses:

- Traffic Engineering
- Pavement Materials and Design
- Highway Maintenance
- Highway Laboratory
- Concrete Technology

Unibeton Ready Mix Dubai, UAE
QA/ QC Engineer June 2015- January 2016

- Ensures the quality records, acceptance certificates, mechanical completion certificates and the documentation for specific systems and buildings/areas are prepared and collated in accordance with project requirements.
- Develops project objectives by reviewing project proposals and plans; conferring with management.

PUBLICATIONS

- 1- Albatayneh, O., Forslöf, L., & Ksaibati, K. "Developing and validating an image processing algorithm for evaluating gravel road dust." *International Journal of Pavement Research and Technology* 12, no. 3 (2019): 288-296. <https://link.springer.com/article/10.1007/s42947-019-0035-y>
- 2- Albatayneh, O., Forslöf, L., & Ksaibati, K. (2020). Image Retraining Using TensorFlow Implementation of the Pretrained Inception-v3 Model for Evaluating Gravel Road Dust. *Journal of Infrastructure Systems*, 26(2), 04020014. <https://ascelibrary.org/doi/abs/10.1061/%28ASCE%29IS.1943-555X.0000545>
- 3- Albatayneh, O., Forslöf, L., & Ksaibati, K. "Utilizing Smartphones and Image Processing Analysis for Evaluating Dust on Gravel Roads." 12th TRB International Conference on Low Volume Roads. September 15-18, 2019 in Kalispell, Montana. <http://onlinepubs.trb.org/onlinepubs/circulars/ec248.pdf>
- 4- Aleadelat, W., Ksaibati, K., and Albatayneh, O. "An optimization tool to select gravel roads for dust chemical treatment projects using genetic algorithms", *International Journal of Pavement Engineering* (2018), <https://www.tandfonline.com/doi/abs/10.1080/10298436.2018.1545092>
- 5- Albatayneh, O., Moomen, M., Farid, A., & Ksaibati, K. (2020). Complementary Modeling of Gravel Road Traffic-Generated Dust Levels Using Bayesian Regularization Feedforward Neural Networks and Binary Probit Regression. *International Journal of Pavement Research and Technology*, 1-8. <https://link.springer.com/article/10.1007/s42947-020-0261-3>
- 6- Aleadelat, W., Albatayneh, O., & Ksaibati, K. (2020). Developing an Optimization Tool for Selecting Gravel Roads Maintenance Strategies using a Genetic Algorithm. *Transportation Research Record*, 0361198120915201. <https://journals.sagepub.com/doi/full/10.1177/0361198120915201>
- 7- Albatayneh, O., Aleadelat, W., & Ksaibati, K. (2019). Dynamic Programming of 0/1 Knapsack Problem for Network-Level Pavement Asset Management System. *Canadian Journal of Civil Engineering*, (ja). <https://doi.org/10.1139/cjce-2019-0368>.
- 8- Khasawneh, M. A., Taamneh, M. M., & Albatayneh, O. (2019). Evaluation of static creep of FORTA-FI strengthened asphalt mixtures using experimental, statistical and feed-forward back-propagation ANN techniques. *International Journal of Pavement Research and Technology*, 12(1), 43-53.
- 9- Farid, A., Albatayneh, O., and Ksaibati, K. "Assessing the Applicability of the Highway Safety Manual to Gravel Roads: A Case Study of Wyoming", Accepted, *Journal of Transportation Safety & Security*.
- 10- Albatayneh, O., Farid, A., and Ksaibati, K. "A Developed Methodology for Determining Gravel Roads' Level of Service: A Case Study of Wyoming", Under Review, *Journal of Traffic and Transportation Engineering (English Edition)*.
- 11- A Review for a Dust Mitigation Tool; Submitted to: The U.S. DOT Volpe Center's Environmental Measurement and Modeling Division.

CONFERENCES / PRESENTATIONS / WORKSHOPS

- 1- Developing an Image Processing Algorithm for Evaluating Gravel Road Dust, 98th Annual TRB Meeting. Walter E. Washington Convention Center, in Washington, D.C, USA.
- 2- Utilizing Smartphones and Image Processing Analysis for Evaluating Dust on Gravel Roads, 12th TRB International Conference on Low Volume Roads. September 15-18, 2019 in Kalispell, Montana.
- 3- Developing an optimization Tool for Selecting Gravel Roads Maintenance Strategies Using a Genetic Algorithm, 12th TRB International Conference on Low Volume Roads. September 15-18, 2019 in Kalispell, Montana.
- 4- Image Retraining Using TensorFlow Implementation of the Pre-trained Inception-v3 Model for Evaluating Gravel Road Dust, 99th Annual TRB Meeting. Walter E. Washington Convention Center, in Washington, D.C, USA.

REVIEWER

- American Journal of Civil Engineering (AJCE)
- International Journal of Pavement Research and Technology (IJPRT)
- Journal of Infrastructure Systems (ASCE)

LICENSES & CERTIFICATIONS

- Engineer In Training (E.I.T), the Wyoming Board of Professional Engineers Professional Land Surveyors.
- Green Concrete Technology. Unibeton Ready Mix – Leading Through Innovation, Jun, 2015.
- Primavera P6. Jordan Engineers Association, Feb, 2015.

VOLUNTEER EXPERIENCE

- Officer, Institute of Transportation Engineers (ITE). University of Wyoming.
- Coordinator, Irbid Youth Volunteer. Jordan