

Resume of Ahmad Ilderim Tokey

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EDUCATION

PhD in Geography, The Ohio State University, OH. GPA: 3.88 (2021- ongoing)
Dissertation: Using Probabilistic Time Geography to Analyze Potential Exposure During Active Transportation
MA in Geography and Planning, The University of Toledo, OH GPA: 3.91 (2019 –2021)
(With Graduate Certificate in Geographic Information Systems)
Thesis: A study on mode choice behavior of Women in the USA
Bachelor of Urban and Regional Planning,
Bangladesh University of Engineering and Technology, Dhaka GPA: 3.30 (2013-2017)
Thesis: An exploratory study on office going bicycle user of Dhaka city.

WORK EXPERIENCE

Graduate Associate at The Ohio State University

- Graduate Research Associate at Center for Urban and Regional Analysis [Aug'23-Date]
 - Project: 3D Digital Reconstruction of Lost Urban Streetscapes: Historic Mt. Vernon Ave in Columbus, Funded by [Betha Endowment](#). [Ghost Neighborhood Project Link](#)
 - Designing the 3D models of 100+ buildings in historic Mt. Vernon Ave using ESRI City Engine
 - Integrating machine learning methods with 3D modeling of historic buildings and landscapes
- Graduate Research Associate at Computational Epidemiology Lab (Public Health) [May'22 – Aug'23]
 - Project: Community Health Workers for COVID Response and Resilient Communities
 - Funded by: Center for Disease Control and Prevention (CDC) [Project Information](#)
 - Served as the lead analyst and developed transportation accessibility metrics for vaccination in 88 counties in Ohio.
 - Developed a dashboard to help health workers identify social inequality in vaccine uptake.
- Graduate Teaching Associate at the Department of Geography [Aug'21 – May'22]
 - Courses: Fundamentals of GIS (GEOG 5210), Transportation Security (GEOG 3300)
 - Selected as Graduate Teaching Facilitator (GTA trainer) in 2024

Transportation Intern at Toledo Metropolitan Area Council of Government

 [May'21 – Aug'21]

- Duties: Traffic data collection and management, bike and pedestrian data management

Graduate Teaching assistant at The University of Toledo

 [Aug'19 – May'21]

- Courses: Spatial Statistics (SISS 8100), Transport Geography (GEPL 5750), Environmental Planning (GEPL 6550) and Environmental Geography (GEPL 1110)

AREA OF EXPERTISE

Topical expertise: Travel survey design and analysis; Travel Behavior Modeling; Demand modeling; Walking, Biking, micromobility, and Transit Usage; Decarbonization; Built Environment; Mobility and transport system analytics; Spatial Accessibility; Multimodal Network analysis; Public health.

Technical expertise: Advanced data analysis in R and Python, Econometric modeling, Big Data Analysis; Machine Learning Models; Spatial Algorithm; Geographical data analysis

SELECTED PUBLICATIONS (13)

1. **Tokey, A.I.**, Liu, L, Miller, H. J, Measuring the Impacts of Sidewalks on Public Transit First Mile/Last Mile Accessibility and their Association with Social and Demographic Factors, Under Review
2. Alam, M.S., Tabassum, N.J. & **Tokey, A.I.** Evaluation of accessibility and equity to hospitals by public transport: evidence from six largest cities of Ohio. *BMC Health Serv Res* **23**, 598 (2023). <https://doi.org/10.1186/s12913-023-09588-0>
3. Liu L, Kar. A., **Tokey, A. I**, Le HTK, Miller H. J., (2023) Disparities in Public Transit Accessibility and Usage by People with Mobility Disabilities: An Evaluation using High-Resolution Transit Data, *Journal of Transport Geography*

4. **Tokey, A. I.**, Alam, M. S., (2023) Understanding the sociodemographic, attitudinal, and trip related characteristics that influence change in teleworking in New York in post-pandemic era. *World Development of Sustainability*. <https://doi.org/10.1016/j.wds.2023.100066>
5. **Tokey, A. I.**, Shioma, S.A & Uddin, M.S. (2023) Assessing the Effectiveness of Built Environment-based Safety Measures by Urban and Rural Area for Reducing Non-motorist Crashes. *Heliyon*. <https://doi.org/10.1016/j.heliyon.2023.e14076>
6. **Tokey, A.I.** (2023). Property crime and violent crime in Detroit: spatial association with built environment before and during COVID-19. *Bulletin of Geography. Socio-economic Series*, 59(59): 131-149. DOI: <http://doi.org/10.12775/bgss-2023-0009>
7. **Tokey, A. I.**, Shioma, S.A., & Jamal, S. (2022). Analysis of spatiotemporal dynamics of e-scooter usage in Minneapolis: Effects of the built and social environment. *Multimodal Transportation*, 1(4), 100037.
8. **Tokey, A.I.** (2021) E-scooters Availability and Social Equity in Minneapolis, MN: A Spatial Modeling Approach, *Findings*, October, <https://doi.org/10.32866/001c.29149>
9. **Tokey, A. I.** (2021). Spatial association of mobility and COVID-19 infection rate in the USA: A county level study using mobile phone location data. *Journal of Transport & Health*, 22, 101135. doi.org/10.1016/j.jth.2021.101135
10. **Tokey, A.I.** (2020). Change of Bike-Share Usage in Five Cities of United States during COVID-19, *Findings, November*. <https://doi.org/10.32866/001c.17851>
11. **Tokey, A. I.**, Shioma, S.A., and Akther, M. S. (2020). Travel cost and time saving of commuting cyclists: A study with logistic regression. In *International Conference on Transportation and Development 2020* (pp. 123-132). Reston, VA: American Society of Civil Engineers (ASCE). <https://doi.org/10.1061/9780784483152.011>
12. **Tokey, A.I.**, Shioma, S. A., Munir, M. M., Akther, S., Islam, I., & Hossain, D. (2020). Redevelopment of a dense area: A participatory planning approach for regeneration in old Dhaka, Bangladesh, *Journal of Regional and City Planning*. 31(3), 217-236. <http://dx.doi.org/10.5614%2Fjpwk.2020.31.3.1>
13. Shioma, S.A., **Tokey, A. I.**, & Akther, M. S. (2017). An Explorative Study on Office Going Bicycle Users of Dhaka City. *Journal of Bangladesh Institute of Planners*, 10, 55-70.

SKILLS USED IN PAST WORKS

Data Analysis: Advanced data manipulation, wrangling, and visualization, dimension reduction (PCA)

Machine Learning and AI: Lasso regression, Ridge Regression, Polynomial regression, Support Vector, DBSCAN, Dimension Reduction, K-fold cross validation, KNN, decision tree, random forest, Neural Network

Econometric Modeling: OLS, WLS, choice models, count data models, time series, ARMA models, Fixed and Random effect models, 2SLS-3SLS, DiD model, Regression discontinuity,

Spatial Analysis: advanced spatial processing, pattern analysis, spatial accessibility calculation, service area analysis, network analysis, multivariate clustering, social network analysis, environmental exposure analysis

Spatial Modeling: Spatial Autoregressive models, local OLS, local logit, spatial panel

Software Proficiency: R (5 years), Python (3 years), ArcGIS (10 years), SPSS (9 years), GeoDa (5 years), STATA (3 years), MS Excel (11 years), Adobe Photoshop (2 years) City Engine and ESRI Urban (1 year)

MAJOR CONFERENCES

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| 1. Transportation Research Board (TRB) Annual Meeting | 2023, 2021. |
| 2. East Lake Division AAG (ELDAAG) Regional Meeting | 2022, 2021, 2020, 2019 |
| 3. American Association of Geographers (AAG) Annual Meeting | 2022, 2021 |
| 4. North America Meetings of the Regional Science Association International | 2021 |
| 5. International Conference on Transportation and Development (ASCE) | 2020 |
| 6. Applied Geography Conference | 2020 |

MAJOR WORKSHOPS

1. Cartography and Geographic Information Society (CaGIS) and the UCGIS Symposium 2024
2. Sloan Workshop on Transportation Equity and Sustainability 2024 (by UIC and UIUC)
3. Ohio GIS Conference 2023 (by County Engineers Association of Ohio)

4. Understanding Everyday Life 2022 (by University of Minneapolis)

AWARDS

1. International Cartographic Association (ICA) Scholarship 2024
2. Fenburr Travel Scholarship 2024 (Department of Geography, The Ohio State University)
3. Best Graduate Paper (3rd place, as co-presenter) (East Lake Division AAG Regional meeting 2022)
4. Robert Raskin Student Competition (3rd place) Cyberinfrastructure Specialty Group, AAG annual meeting 2021 ([web link](#), [twitter](#))
5. John Odland Award and Peter Gould Student Award (shortlisted), AAG 2021
6. Best Graduate Poster (2nd place) (East Lake Division AAG Regional meeting 2020)
7. Best Undergraduate Thesis 2018 (by Bangladesh Institute of Planners) 2018
8. Champion, Planning Documentary Competition (by Bangladesh Institute of Planners) 2018

VOLUNTARY WORKS

1. Personnel Committee Representative, Geography Graduate Organization, OSU (May'23- Present)
2. Proctor, Edward F Hayes Advanced Research Forum 2023, OSU
3. Vice President, Graduate Muslim Club, OSU (May 2023-Present)
4. Former Treasurer, Bangladeshi Graduate Student Association, OSU (August 2022-Present)
5. Chair, R&D Committee, Graduate Student Association, University of Toledo (Jan 2020-Dec 2020)
6. Secretary (elected), Bangladeshi Student Association, University of Toledo (Jan 2020-Jan 2021)

PEER-REVIEWER ACTIVITY (27)

Scientific Reports (Nature: 1 review); **Humanities & Social Sciences Communications** (Nature: 1 review); **Regional Studies** (T&F: 2 reviews); **Journal of Transportation Research: Part D** (Elsevier: 2 Reviews) **Journal of Public Transportation** (Elsevier: 2 reviews); **Journal of Transport Geography**. (1 review); **Transportation Research Record** (SAGE: 1 review); **Design Principle and Practice** (Common Ground RN: 2 Review); **Findings**. (9 reviews); **TRB Annual Meeting** (3 reviews); **Transportation Planning and Technology** (T&F) (2 reviews); **Traffic and Transportation**, (1 review)

SPECIAL ROLES

1. **Reviewer:** Workshop on Urban Extreme Heat Mapping | GIS Pro 2024
2. **Facilitator:** Graduate Teaching Orientation (GTO) | The Ohio State University | Autumn 2024
3. **Guest Lecturer:** Undergraduate Research and Professionalization Seminar (GEOG 4101, OSU)
4. **Lightning talk:** Prospective Grad student visit day 2023, Dept of Geography, The Ohio State University

PROFESSIONAL AFFILIATIONS

1. Student Member, Urban Regional Information System Association (URISA)
2. Member, American Association of Geographer (AAG)
3. Student Member, American Planning Association (APA)