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A multi-group analysis of car-hailing and taxi on loyalty intention in Hong Kong

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References

- J. Wang, H. Lu, and H. Peng, "System Dynamics Model of Urban Transportation System and Its Application," Journal of Transportation Systems Engineering and Information Technology, vol. 8, no. 3, pp. 83-89, 2008, doi: 10.1016/S1570-6672(08)60027-6.
- [2] H. Sivilevičius, "Modelling the interaction of transport system elements," Transport, vol. 26, no. 1, pp. 20-34, 2011, doi: 10.3846/16484142.2011.560366.
- [3] D. Boyce, "Transportation systems," in Transportation engineering and planning, T. J. Kim, Ed., Paris, France: UNESCO-EOLSS, 2009, pp. 160-164.
- [4] Z. Wang, Z. Xu, X. Wang, and M. Xie, "A temporal-spatial cleaning optimization method for photovoltaic power plants," Sustainable Energy Technologies and Assessments, vol. 49, p. 101691, 2022, doi: 10.1016/j.seta.2021.101691.
- [5] B. Tahir and M. Tariq, "Vulnerability assessment and federated intrusion detection of Air Taxi enabled smart cities," Sustainable Energy Technologies and Assessments, vol. 53, p. 102686, 2022, doi: 10.1016/j.seta.2022.102686.
- [6] S. Roga, S. Bardhan, Y. Kumar, and S. K. Dubey, "Recent technology and challenges of wind energy generation: A review," Sustainable Energy Technologies and Assessments, vol. 52, p. 102239, 2022, doi: 10.1016/j.seta.2022.102239.
- [7] R. Dhinesh Kumar and S. Chavhan, "Shift to 6G: Exploration on trends, vision, requirements, technologies, research, and standardization efforts," Sustainable Energy Technologies and Assessments, vol. 54, p. 102666, 2022, doi: 10.1016/j. seta.2022.102666.
- [8] Y. Ge, X. Liu, L. Tang, and D. M. West, Smart transportation in China and the United States, Washington, DC, USA: Brookings Institution, 2017.
- [9] N. Wang, B. Li, Y. Duan, and S. Jia, "A multi-energy scheduling strategy for orderly charging and discharging of electric vehicles based on multi-objective particle swarm optimization," Sustainable Energy Technologies and Assessments, vol. 44, p. 101037, 2021, doi: 10.1016/j.seta.2021.101037.
- [10] H. Xiao, H. Jiang, F.-R. Shi, Y. Luo, and L.-P. Deng, "Energy efficient resource allocation in delay-aware UAV-based cognitive radio networks with energy harvesting," Sustainable Energy Technologies and Assessments, vol. 45, p. 101204, 2021, doi: 10.1016/j.seta.2021.101204.
- [11] Z. Li, O. Pu, Y. Pan, B. Huang, Z. Zhao, and H. Wu, "A study on measuring wind turbine wake based on UAV anemometry system," Sustainable Energy Technologies and Assessments, vol. 53, p. 102537, 2022, doi: 10.1016/j.seta.2022.102537.
- [12] M. Manikandan, E. Vaidya, and R. S. Pant, "Design and analysis of hybrid electric multi-lobed airship for cargo transportation," Sustainable Energy Technologies and Assessments, vol. 51, p. 101892, 2022, doi: 10.1016/j.seta.2021.101892.
- [13] V. patki et al., "Improving the geo-drone-based route for effective communication and connection stability improvement in the emergency area ad-hoc network," Sustainable Energy Technologies and Assessments, vol. 53, p. 102558, 2022, doi: 10.1016/j. seta.2022.102558.
- [14] X. Zhang, P. Zheng, T. Peng, Q. He, C. K. M. Lee, and R. Tang, "Promoting employee health in smart office: A survey," Advanced Engineering Informatics, vol. 51, p. 101518, 2022, doi: 10.1016/j.aei.2021.101518.
- [15] N. Sun, G. Han, P. Duan, and J. Tan, "A global and dynamitic route planning application for smart transportation," in First International Conference on Computational Intelligence Theory, Systems and Applications (CCITSA), 2015, pp. 203-208.
- [16] J. A. Jimenez, "Smart Transportation Systems," in Smart Cities, S. McClellan, J. Jimenez, and G. Koutitas, Eds., Cham, Switzerland: Springer, 2018, pp.123-133, doi: 10.1007/978-3-319-59381-4_8.

- [17] L. Xia, P. Zheng, X. Huang, and C. Liu, "A novel hypergraph convolution network-based approach for predicting the material removal rate in chemical mechanical planarization," Journal of Intelligent Manufacturing, vol. 33, pp. 2295–2306, 2022, doi: 10.1007/s10845-021-01784-1.
- [18] P. Zheng, L. Xia, C. Li, X. Li, and B. Liu, "Towards Self-X cognitive manufacturing network: An industrial knowledge graphbased multi-agent reinforcement learning approach," Journal of Manufacturing Systems, vol. 61, pp. 16-26, 2021, doi: 10.1016/j. jmsy.2021.08.002.
- [19] T. Jing, P. Zheng, L. Xia, and T. Liu, "Transformer-based hierarchical latent space VAE for interpretable remaining useful life prediction," Advanced Engineering Informatics, vol. 54, p. 101781, 2022, doi: 10.1016/j.aei.2022.101781.
- [20] L. Xia, P. Zheng, X. Li, R. X. Gao, and L. Wang, "Toward cognitive predictive maintenance: A survey of graph-based approaches," Journal of Manufacturing Systems, vol. 64, pp. 107-120, 2022, doi: 10.1016/j.jmsy.2022.06.002.
- [21] P. Zheng, S. Li, L. Xia, L. Wang, and A. Nassehi, "A visual reasoning-based approach for mutual-cognitive human-robot collaboration," CIRP Annals, 2022, doi: 10.1016/j.cirp.2022.04.016.
- [22] Y. Liang, P. Zheng, and L. Xia, "A visual reasoning-based approach for driving experience improvement in the AR-assisted headup displays," Advanced Engineering Informatics, vol. 55, p. 101888, 2023, doi: 10.1016/j.aei.2023.101888.
- [23] L. Xia, Y. Liang, J. Leng, and P. Zheng, "Maintenance planning recommendation of complex industrial equipment based on knowledge graph and graph neural network," Reliability Engineering & System Safety, vol. 232, p. 109068, 2023, doi: 10.1016/j. ress.2022.109068.
- [24] S. Muthuramalingam, A. Bharathi, N. Gayathri, R. Sathiyaraj, and B. Balamurugan, "IoT Based Intelligent Transportation System (IoT-ITS) for Global Perspective: A Case Study," in Internet of Things and Big Data Analytics for Smart Generation, V. Balas, V. Solanki, R. Kumar, and M. Khari, Eds. Cham, Switzarland: Springer, 2019, vol 154, chapter 13, pp. 279-300, doi: 10.1007/978-3-030-04203-5_13.
- [25] X. Zhang, J. Fan, T. Peng, P. Zheng, X. Zhang, and R. Tang, "Multimodal data-based deep learning model for sitting posture recognition toward office workers' health promotion," Sensors and Actuators A: Physical, vol. 350, p. 114150, 2023, doi: 10.1016/j. sna.2022.114150.
- [26] X. Zhang, J. Fan, T. Peng, P. Zheng, C. K. M. Lee, and R. Tang, "A privacy-preserving and unobtrusive sitting posture recognition system via pressure array sensor and infrared array sensor for office workers," Advanced Engineering Informatics, vol. 53, p. 101690, 2022, doi: 10.1016/j.aei.2022.101690.
- [27] C. Y. Yiu et al., "Towards safe and collaborative aerodrome operations: Assessing shared situational awareness for adverse weather detection with EEG-enabled Bayesian neural networks," Advanced Engineering Informatics, vol. 53, p. 101698, 2022, doi: 10.1016/j.aei.2022.101698.
- [28] L. Xia, Y. Liang, P. Zheng, and X. Huang, "Residual-Hypergraph Convolution Network: A Model-Based and Data-Driven Integrated Approach for Fault Diagnosis in Complex Equipment," IEEE Transactions on Instrumentation and Measurement, vol. 72, pp. 1-11, 2023, doi: 10.1109/TIM.2022.3227609.
- [29] C. F. Lui, Y. Liu, and M. Xie, "A Supervised Bidirectional Long Short-Term Memory Network for Data-Driven Dynamic Soft Sensor Modeling," IEEE Transactions on Instrumentation and Measurement, vol. 71, pp. 1-13, 2022, doi: 10.1109/ TIM.2022.3152856.
- [30] C. Liu, Z. Su, X. Xu, and Y. Lu, "Service-oriented industrial internet of things gateway for cloud manufacturing," Robotics and Computer-Integrated Manufacturing, vol. 73, p. 102217, 2022, doi: 10.1016/j.rcim.2021.102217.
- [31] S. Li, P. Zheng, J. Fan, and L. Wang, "Toward Proactive Human-Robot Collaborative Assembly: A Multimodal Transfer-Learning-Enabled Action Prediction Approach," IEEE Transactions on Industrial Electronics, vol. 69, no. 8, pp. 8579-8588, 2022, doi: 10.1109/TIE.2021.3105977.
- [32] B. Liu, Y. Zhang, G. Zhang, and P. Zheng, "Edge-cloud orchestration driven industrial smart product-service systems solution design based on CPS and IIoT," Advanced Engineering Informatics, vol. 42, p. 100984, 2019, doi: 10.1016/j.aei.2019.100984.
- [33] Z. Huang, J. Fan, S. Cheng, S. Yi, X. Wang, and H. Li, "HMS-Net: Hierarchical Multi-Scale Sparsity-Invariant Network for Sparse Depth Completion," IEEE Transactions on Image Processing, vol. 29, pp. 3429-3441, 2020, doi: 10.1109/TIP.2019.2960589.
- [34] S. Li, J. Fan, P. Zheng, and L. Wang, "Transfer Learning-enabled Action Recognition for Human-robot Collaborative Assembly," Proceedia CIRP, vol. 104, pp. 1795-1800, 2021, doi: 10.1016/j.procir.2021.11.303.
- [35] S. Li, P. Zheng, J. Fan, and L. Wang, "Towards Proactive Human Robot Collaborative Assembly: A Multimodal Transfer Learning-Enabled Action Prediction Approach," IEEE Transactions on Industrial Electronics, vol. 69, no. 8, pp. 8579-8588, 2022, doi: 10.1109/TIE.2021.3105977.
- [36] B. Liu, Y. Zhang, J. Lv, A. Majeed, C.-H. Chen, and D. Zhang, "A cost-effective manufacturing process recognition approach based on deep transfer learning for CPS enabled shop-floor," Robotics and Computer-Integrated Manufacturing, vol. 70, p. 102128, 2021, doi: 10.1016/j.rcim.2021.102128.
- [37] J. Fan, P. Zheng, and S. Li, "Vision-based holistic scene understanding towards proactive human-robot collaboration," Robotics and Computer-Integrated Manufacturing, vol. 75, p. 102304, 2022, doi: 10.1016/j.rcim.2021.102304.
- [38] J. Fan, P. Zheng, S. Li, and L. Wang, "An Integrated Hand-Object Dense Pose Estimation Approach With Explicit Occlusion Awareness for Human-Robot Collaborative Disassembly," IEEE Transactions on Automation Science and Engineering, pp. 1-10, 2022, doi: 10.1109/TASE.2022.3215584.
- [39] F. Weichert, D. Bachmann, B. Rudak, and D. Fisseler, "Analysis of the Accuracy and Robustness of the Leap Motion Controller," Sensors, vol. 13, no. 5, pp. 6380-6393, 2013, doi: doi.org/10.3390/s130506380.
- [40] E. Cascetta, Transportation systems engineering: theory and methods. Springer Science & Business Media, 2013.
- [41] A. Belz, E. Healey, and K. Hudgins, "Car sharing: A feasibility study in Hong Kong," Worcester Polytechnic Institute, Hong Kong, 2016. Accessed: June 5, 2024. [Online]. Available: https://digital.wpi.edu/pdfviewer/gx41mj15x.
- [42] K. Y. Leung and H. Y. Lee, "Implementing the smart city: Who has a say? Some insights from Hong Kong," International Journal of Urban Sciences, vol. 27, pp. 124-148, 2023, doi: 10.1080/12265934.2021.1997634.
- [43] Z. He, C.-Y. Chow, and J.-D. Zhang, "A comparative analysis of journey time from Google Maps and intelligent transport system in Hong Kong," in 2019 IEEE 21st International Conference on High Performance Computing and Communications; IEEE 17th International Conference on Smart City; IEEE 5th International Conference on Data Science and Systems (HPCC/SmartCity/ DSS), 2019: IEEE, pp. 2610-2617.

- [44] F. Cai, T. Chen, X. Zhang, J. Chen, H. Zhang, B. Zhang, "Service Quality Evaluation Model of Public Living Facilities in a Community," Tehnicki Vjesnik, vol. 29, no. 5, pp. 1749 – 1761, 2022, doi: 10.17559/TV-20220420060304.
- [45] S. Poon and P. Y. Chau, "Octopus: the growing e-payment system in Hong Kong," Electronic markets, vol. 11, no. 2, pp. 97-106, 2001.
- [46] Q. Li, K. K. H. Ng, Z. Fan, X. Yuan, H. Liu, and L. Bu, "A human-centred approach based on functional near-infrared spectroscopy for adaptive decision-making in the air traffic control environment: A case study," Advanced Engineering Informatics, vol. 49, p. 101325, 2021, doi: 10.1016/j.aei.2021.101325.
- [47] Q. Li et al., "Effects of the multisensory rehabilitation product for home-based hand training after stroke on cortical activation by using NIRS methods," Neuroscience Letters, vol. 717, p. 134682, 2020, doi: 10.1016/j.neulet.2019.134682.
- [48] S. Ahmed, M. Xu, and T. C. Huen, "From the users' and the operators' perceptions: the potential of carsharing in Hong Kong," in 2021 9th International Conference on Information Technology: IoT and Smart City, 2021, New York: Association for Computing Machinery, 2022, pp. 545-553, doi: 10.1145/3512576.3512669.
- [49] P. Raj, E. Bhaduri, R. Moeckel, and A. K. Goswami, "Analyzing User Behavior in Selection of Ride-Hailing Services for Urban Travel in Developing Countries," Transportation in Developing Economies, vol. 9, no. 1, pp. 1-14, 2023.
- [50] European Travel Comission, "Study on Generation Z Travellers," 2020. [Online]. Available: https://etc-corporate.org/ uploads/2020/07/2020_ETC-Study-Generation-Z-Travellers.pdf
- [51] S. K. Mitra, Y. Bae, and S. G. Ritchie, "Use of ride-hailing services among older adults in the United States," Transportation research record, vol. 2673, no. 3, pp. 700-710, 2019.
- [52] T. Litman and D. Burwell, "Issues in sustainable transportation," International Journal of Global Environmental Issues, vol. 6, no. 4, pp. 331-347, 2006.
- [53] M. Gholikhani, S. A. Tahami, M. Khalili, and S. Dessouky, "Electromagnetic energy harvesting technology: Key to sustainability in transportation systems," Sustainability, vol. 11, no. 18, p. 4906, 2019, doi: 10.3390/su11184906.
- [54] K. Iqbal, M. A. Khan, S. Abbas, Z. Hasan, and A. Fatima, "Intelligent transportation system (ITS) for smart-cities using Mamdani fuzzy inference system," International journal of advanced computer science and applications, vol. 9, no. 2, pp. 94-105, 2018.
- [55] B. Beškovnik, "Supply chain engineering: Considering parameters for sustainable overseas intermodal transport of small consignments," Advances in Production Engineering And Management, vol. 18, no. 1, pp. 79-91, 2023, doi: 10.14743/ apem2023.1.458.
- [56] K. Li, D. Li, and H. Q. Ma, "An improved discrete particle swarm optimization approach for a multi-objective optimization model of an urban logistics distribution network considering traffic congestion," Advances in Production Engineering And Management, vol. 18, no. 2, pp. 211–224, 2023, doi: 10.14743/apem2023.2.468.
- [57] R. Lin, Y. Liu, Y. Man, and J. Ren, "Towards a sustainable distributed energy system in China: decision-making for strategies and policy implications," Energy, Sustainability and Society, vol. 9, no. 1, p. 51, 2019, doi: 10.1186/s13705-019-0237-9.
- [58] Y. Liu, R. Lin, Y. Man, and J. Ren, "Recent developments of hydrogen production from sewage sludge by biological and thermochemical process," International Journal of Hydrogen Energy, vol. 44, no. 36, pp. 19676-19697, 2019, doi: 10.1016/j. ijhydene.2019.06.044.
- [59] R. Lin, S. Lu, A. Yang, W. Shen, and J. Ren, "Multi-criteria sustainability assessment and decision-making framework for hydrogen pathways prioritization: An extended ELECTRE method under hybrid information," International Journal of Hydrogen Energy, vol. 46, no. 24, pp. 13430-13445, 2021, doi: 10.1016/j.ijhydene.2021.01.018.
- [60] Y. Liu, R. Lin, and J. Ren, "Developing a life cycle composite footprint index for sustainability prioritization of sludge-to-energy alternatives," Journal of Cleaner Production, vol. 281, p. 124885, 2021, doi: 10.1016/j.jclepro.2020.124885.
- [61] D. Z. Leuenberger, J. R. Bartle, and C. Chen, "Sustainability and transportation," Public Works Management & Policy, vol. 19, no. 4, pp. 316-321, 2014.
- [62] S. A. H. Shah and K. Hisashi, "Analyzing travelers' attitude towards ride-hailing services in developing countries: Case of Lahore, Pakistan," IATSS Research, vol. 46, no. 2, pp. 223-235, 2022.
- [63] D. Q. Nguyen-Phuoc, N. S. Vo, D. N. Su, V. H. Nguyen, and O. Oviedo-Trespalacios, "What makes passengers continue using and talking positively about ride-hailing services? The role of the booking app and post-booking service quality," Transportation Research Part A: Policy and Practice, vol. 150, pp. 367-384, 2021.
- [64] A. Tirachini, "Ride-hailing, travel behaviour and sustainable mobility: an international review," Transportation, vol. 47, no. 4, pp. 2011-2047, 2020.
- [65] J. Lee, J. Kim, H. Kim, and J. Hwang, "Sustainability of ride-hailing services in China's mobility market: A simulation model of socio-technical system transition," (in eng), Telematics and informatics, vol. 53, p. 101435, 2020, doi: 10.1016/j.tele.2020.101435.
- [66] J. Shen, F. Qiu, W. Li, and P. Feng, "Exploring the effect of the telephone/online booking system on taxi service: Case study of Suzhou City in China," in CICTP 2015, 2015, pp. 1201-1212.
- [67] C. Mulley and J. D. Nelson, "Flexible transport services: A new market opportunity for public transport," Research in Transportation Economics, vol. 25, no. 1, pp. 39-45, 2009.
- [68] D. Q. Nguyen-Phuoc, D. N. Su, M. H. Nguyen, N. S. Vo, and O. Oviedo-Trespalacios, "Factors influencing intention to use ondemand shared ride-hailing services in Vietnam: risk, cost or sustainability?," Journal of Transport Geography, vol. 99, p. 103302, 2022.
- [69] Y. Heath and R. Gifford, "Extending the theory of planned behavior: Predicting the use of public transportation 1," Journal of applied social psychology, vol. 32, no. 10, pp. 2154-2189, 2002.
- [70] I. Ajzen, "The theory of planned behavior," Organizational behavior and human decision processes, vol. 50, no. 2, pp. 179-211, 1991.
- [71] D. Q. Nguyen-Phuoc, D. N. Su, T. Nguyen, N. S. Vo, A. T. P. Tran, and L. W. Johnson, "The roles of physical and social environments on the behavioural intention of passengers to reuse and recommend bus systems," Travel Behaviour and Society, vol. 27, pp. 162-172, 2022.
- [72] D. Q. Nguyen-Phuoc, P. T. K. Tran, D. N. Su, O. Oviedo-Trespalacios, and L. W. Johnson, "The formation of passenger loyalty: Differences between ride-hailing and traditional taxi services," Travel Behaviour and Society, vol. 24, pp. 218-230, 2021.
- [73] D. Q. Nguyen-Phuoc, D. N. Su, P. T. K. Tran, D.-T. T. Le, and L. W. Johnson, "Factors influencing customer's loyalty towards ride-hailing taxi services-A case study of Vietnam," Transportation Research Part A: Policy and Practice, vol. 134, pp. 96-112, 2020.

- [74] D. Q. Nguyen-Phuoc, T. Nguyen, D. N. Su, P. T. Le, and O. Oviedo-Trespalacios, "How do social cues from other passengers affect word-of-mouth and intention to continue using bus services? A second-order SEM approach," Transportation Research Part A: Policy and Practice, vol. 158, pp. 302-320, 2022.
- [75] Y. Liu, Q. Gao, and P.-L. P. Rau, "Chinese passengers' security perceptions of ride-hailing services: An integrated approach combining general and situational perspectives," Travel Behaviour and Society, vol. 26, pp. 250-269, 2022.
- [76] S. Leonnard, M. Comm, and F. Thung, "The relationship of service quality, word-of-mouth, and repurchase intention in online transportation services," Journal of process management and new technologies, vol. 5, no. 4, pp. 30-40, 2017.
- [77] S. Lee, B.-L. Chua, and H. Han, "Role of service encounter and physical environment performances, novelty, satisfaction, and affective commitment in generating cruise passenger loyalty," Asia Pacific Journal of Tourism Research, vol. 22, no. 2, pp. 131-146, 2017.
- [78] M. del Mar Alonso-Almeida, "Carsharing: Another gender issue? Drivers of carsharing usage among women and relationship to perceived value," Travel behaviour and society, vol. 17, pp. 36-45, 2019.
- [79] W. C. Tsai and Y. M. Huang, "Mechanisms Linking Employee Affective Delivery and Customer Behavioral Intentions," Journal of Applied Psychology, vol. 87, no. 5, pp. 1001–1008, 2002, doi: 10.1037/0021-9010.87.5.1001.
- [80] G. S. Weng, S. Zailani, M. Iranmanesh, and S. S. Hyun, "Mobile taxi booking application service's continuance usage intention by users," Transportation Research Part D: Transport and Environment, vol. 57, pp. 207-216, 2017.
- [81] C. K. H. Lee and A. O. M. Wong, "Antecedents of consumer loyalty in ride-hailing," Transportation Research Part F: Traffic Psychology and Behaviour, vol. 80, pp. 14-33, 2021.
- [82] E. Almirall, J. Wareham, C. Ratti, P. Conesa, F. Bria, A. Gaviria, and A. Edmondson, "Smart Cities at the Crossroads: New Tensions in City Transformation," California Management Review, vol. 59, no. 1, pp. 141–152, 2016, doi: 10.1177/0008125616683949.
- [83] A. Pham, I. Dacosta, B. Jacot-Guillarmod, K. Huguenin, T. Hajar, F. Tramèr, V. Gligor, and J. P. Hubaux, "PrivateRide: A Privacy-Enhanced Ride-Hailing Service," Proceedings on Privacy Enhancing Technologies, vol. 2, pp. 38–56, 2017, doi: 10.1515/ popets-2017-0015.
- [84] F. Hardin-Fanning and J. M. Ricks, "Attitudes, social norms and perceived behavioral control factors influencing participation in a cooking skills program in rural Central Appalachia," Global health promotion, vol. 24, no. 4, pp. 43-52, 2017.
- [85] J. Dawes, "Do Data Characteristics Change According to the Number of Scale Points Used? An Experiment Using 5-Point, 7-Point and 10-Point Scales," International Journal of Market Research, vol. 50, no. 1, pp. 61-104, 2008/01/01 2008, doi: 10.1177/147078530805000106.
- [86] L. Matthews, "Applying Multigroup Analysis in PLS-SEM: A Step-by-Step Process," in Partial Least Squares Path Modeling, H. Latan and R.Noonan, Eds. Cham, Switzarland: Springer, 2017, doi: 10.1007/978-3-319-64069-3_10.
- [87] J. F. Hair, W. C. Black, B. J. Babin, and R. E. Anderson, Multivariate Data Analysis. Pearson New International Edition, 2009.
- [88] C. Fornell and D. F. Larcker, "Evaluating structural equation models with unobservable variables and measurement error," Journal of Marketing Research, vol. 18, no. 1, pp. 39-50, 1981, doi: 10.2307/3151312.
- [89] K. K. K. Wong., "Partial least square structural equation modeling (PLS-SEM) techniques using SmartPLS," Marketing Bulletin, vol. 24, pp. 1-32, 2013.
- [90] A. W. Siyal, C. Hongzhuan, and C. Gang, "From consumer satisfaction to recommendation of mobile app-based services: An overview of mobile taxi booking apps," SAGE Open, vol. 11, no. 1, p. 21582440211004179, 2021.