

<b>Name 1:</b>	Benjamin Akhtar	<b>Access ID:</b>	baa5374
<b>Name 2:</b>	Haotian Fang	<b>Access ID:</b>	hpf5075
<b>Name 3:</b>	Praneeth Ramesh	<b>Access ID:</b>	pqr5197
<b>Name 4:</b>	Param Somane	<b>Access ID:</b>	pss5256

## Chosen topic: AI for Urban Computing

### References

#### 1. What are some challenges we are facing?

- [1] W. Liu et al., *Special issue on intelligent urban computing with big data*. Machine Vision and Applications Vol. 28, 675–677, 2017.  
<https://link.springer.com/article/10.1007/s00138-017-0877-8>.
- [2] N. Oliver. *Urban Computing and Smart Cities: Opportunities and Challenges in Modelling Large-Scale Aggregated Human Behavior*. Lecture Notes in Computer Science, Vol. 7065. [https://link.springer.com/chapter/10.1007/978-3-642-25446-8\\_2](https://link.springer.com/chapter/10.1007/978-3-642-25446-8_2).
- [3] Mamta and C. Nagpal. *Urban Computing: Key Challenges and Issues of Traffic Management System*. International Journal of Computer Applications, 0975 – 8887, Vol. 179, No. 26, 2018.  
<https://www.ijcaonline.org/archives/volume179/number26/mamta-2018-ijca-916552.pdf>.
- [4] The 9th SIGKDD International Workshop on Urban Computing (Call for papers). <http://urban.cs.wpi.edu/urbcomp2020>.
- [5] M. Bouroche and I. Dusparic. Urban Computing: The Technological Framework for Smart Cities. © Springer Nature Switzerland AG 2020.  
[https://doi.org/10.1007/978-3-030-15145-4\\_5-1](https://doi.org/10.1007/978-3-030-15145-4_5-1).

#### 2. How can AI help us address those challenges?

- [6] W. Cui. Meeting the data challenges of urban computing, 2015. *PHYS.ORG*. <https://phys.org/news/2015-09-urban.html>.
- [7] H. Mora et al., *Distributed Architectures for Intensive Urban Computing: A Case Study on Smart Lighting for Sustainable Cities*. IEEE Access Vol. 7, 2019. <https://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=8705293>.
- [8] Y. Zheng. *Urban Computing: Concepts, Methodologies, and Applications*. ACM Transactions on Intelligent Systems and Technology, Vol. 5, No. 3, Article 38, 2014. [https://www.cs.uic.edu/~wolfson/other\\_ps/acm\\_urbancomp\\_concept\\_14.pdf](https://www.cs.uic.edu/~wolfson/other_ps/acm_urbancomp_concept_14.pdf).
- [9] G. Hager et al., *Artificial Intelligence for Social Good: Urban Computing*. Computing Community Consortium, 2017,  
<https://arxiv.org/ftp/arxiv/papers/1901/1901.05406.pdf>.
- [10] M. Sarazen. Can AI Reimagine City Configuration and Automate Urban Planning?, *SyncedReview.com*,  
<https://syncedreview.com/2020/08/28/can-ai-reimagine-city-configuration-and-automate-urban-planning>.

#### 3. What are some specific AI technologies being used?

- [11] W. Wu et al., *Visual Analytics in Urban Computing: An Overview*. IEEE Transactions on Big Data, Vol. 2, No. 3, 2016.  
<https://ieeexplore.ieee.org/document/7506246>.
- [12] D. Wang et al., *Reimagining City Configuration: Automated Urban Planning via Adversarial Learning*. SIGSPATIAL '20, November 3–6, 2020, Seattle, WA, USA. <https://arxiv.org/pdf/2008.09912.pdf>.
- [13] T. Yigitcanlar et al., *Artificial Intelligence Technologies and Related Urban Planning and Development Concepts: How Are They Perceived and Utilized in Australia?* J. Open Innov. Technol. Mark. Complex. 2020, 6(4), 187; <https://doi.org/10.3390/joitmc6040187>.
- [14] A. Tomer. Artificial intelligence in America's digital city, *brookings.edu*.  
<https://www.brookings.edu/research/artificial-intelligence-in-americas-digital-city>.
- [15] Q. Na et al., *A Novel Heuristic Artificial Neural Network Model for Urban Computing*. IEEE Access Vol. 7, 2019.  
<https://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=8936976>.

#### 4. What results have been achieved using AI?

- [16] F. Cugurullo. *Urban Artificial Intelligence: From Automation to Autonomy in the Smart City*.  
<https://doi.org/10.3389/frsc.2020.00038>.
- [17] M. Marconcini et al., Artificial Intelligence for Mapping and Urban Monitoring, *understandrisk.org*.  
<https://understandrisk.org/event-session/artificial-intelligence-for-mapping-and-urban-monitoring>.
- [18] Y. Zheng. *Urban Computing*, <http://urban-computing.com/index.htm>.
- [19] Y. Zheng. *U-Air: When Urban Air Quality Inference Meets Big Data*. <https://dl.acm.org/doi/pdf/10.1145/2487575.2488188>.
- [20] Y. Zheng. *Urban computing: enabling urban intelligence with big data*. Front. Comput. Sci., 2017, 11(1): 1–3.  
<https://link.springer.com/content/pdf/10.1007/s11704-016-6907-2.pdf>. Accompanying lecture "Urban Computing: Building Intelligent Cities with Big Data and AI."
- [21] *Urban Computing Foundation*. <https://uc.foundation>.