

Mixed Reality Based Application for Bidding System

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Abstract: *Augmented Reality and Mixed Reality applications are being used in multiple domains to improve efficiency of the system and adding new features. Auctions/Bidding systems are there in market for long time and are being used widely by many users. This paper focusses on how Mixed Reality and Augmented Reality can be used to provide new and intuitive experience to the users. Objective behind using AR/MR in the bidding system is augmenting the actual bidding experience, a user can get in physical environment to be made available virtually. AR based applications are intuitive and have introduced new kind of user interface which can be explored according to users will and natural gestures. Combining AR/MR with Cloud to provide real time updates on current bid. As bidding/auction systems need to be updated instantly and current bid value needs to be shown. Paper proposes how AR/MR with YOLO detection can be used with Cloud technologies to achieve real-time, robust bidding system with intuitive user interface.*

Keywords: Augmented Reality, Mixed Reality, Cloud, Real- Time, YOLO (You Only Look Once)

REFERENCES

- [1]. Statista. 2022. VR/AR market size 2024 | Statista. [online] Available at: <<https://www.statista.com/statistics/591181/global-augmented-virtual-reality-market-size/>> [Accessed 7 May 2022]. Statista. 2022. VR/AR market size 2024 | Statista. [online] Available at: <<https://www.statista.com/statistics/591181/global-augmented-virtual-reality-market-size/>> [Accessed 7 May 2022].
- [2]. Redmon, J. and Divvala, S., 2016. You Only Look Once: Unified, Real-Time Object Detection. cs.CV,.
- [3]. M. B. Blaschko and C. H. Lampert. Learning to localize objects with structured output regression. In Computer Vision—ECCV 2008, pages 2–15. Springer, 2008.
- [4]. L. Bourdev and J. Malik. Poselets: Body part detectors trained using 3d human pose annotations. In International Conference on Computer Vision (ICCV), 2009.
- [5]. N. Dalal and B. Triggs. Histograms of oriented gradients for human detection. In Computer Vision and Pattern Recognition, 2005. CVPR 2005. IEEE Computer Society Conference on, volume 1, pages 886–893. IEEE, 2005
- [6]. T. Dean, M. Ruzon, M. Segal, J. Shlens, S. Vijaya narasimhan, J. Yagnik, et al. Fast, accurate detection of 100,000 object classes on a single machine. In Computer Vision and Pattern Recognition (CVPR), 2013 IEEE Conference on, pages 1814–1821. IEEE, 2013.
- [7]. J. Donahue, Y. Jia, O. Vinyals, J. Hoffman, N. Zhang, E. Tzeng, and T. Darrell. Decaf: A deep convolutional activation feature for generic visual recognition. arXiv preprint 2013.
- [8]. J. Dong, Q. Chen, S. Yan, and A. Yuille. Towards unified object detection and semantic segmentation. In Computer Vision—ECCV 2014, pages 299–314. Springer, 2014.
- [9]. D. Erhan, C. Szegedy, A. Toshev, and D. Anguelov. Scalable object detection using deep neural networks. In Computer Vision and Pattern Recognition (CVPR), 2014 IEEE Conference on, pages 2155–2162. IEEE, 2014.
- [10]. M. Everingham, S. M. A. Eslami, L. Van Gool, C. K. I. Williams, J. Winn, and A. Zisserman. The pascal visual object classes challenge: A retrospective. International Journal of Computer Vision, 111(1):98–136, Jan. 2015
- [11]. P. F. Felzenszwalb, R. B. Girshick, D. McAllester, and D. Ramanan. Object detection with discriminatively

trained part based models. IEEE Transactions on Pattern Analysis and Machine Intelligence, 32(9):1627–1645, 2010.