Document details

‹ Back to results | 1 of 1

Export Download Print E-mail Save to PDF Add to List More... ›

Full Text View at Publisher

Indonesian Journal of Electrical Engineering and Computer Science Open Access
Volume 17, Issue 2, 2019, Pages 833-844

Augmented reality an economical solution for engineers and designers

(Article) (Open Access)

Nasir, S.[a], Zahid, M.N.[a], Khan, T.A.[b,c], Kadir, K.[d], Khan, S.[e]

[a]Faculty Of Science and Technology, Ilma University Formerly IBT, Pakistan
[b]Universiti Kuala Lumpur, British Malaysian Institute (BMI), Malaysia
[c]Usman Institute of Technology (NED University), Pakistan

View additional affiliations

Abstract

View references (26)

Now a days, with obscene workload and a busy life, many experts face problems which more or less result in loss of their customers or to certain overheads that immobilize the customer's satisfaction process. The software being proposed will facilitates professional from various field like in mechanical designing, interior designing and that of architects. This research proposal most likely acts as an effective tool that can reduce the gap between industrial enterprises and customers in addition to other relevant business groups. It helps to visualize architectural designs and interior designs. Before the physical implementation, a virtual model of a real environment can be designed, enabling designers to virtually implement their idea in the given workspace and then view it in a real environment, enabling designers to view their 3D visualizations on their 2D drawings this help them to initially visualize and reconstruct the design without wasting a large amount of money making it a cost-effective solution . Application is based on my observations of the user's aspirations of an augmented reality in design service, a service that combines different social media functionality, augmented reality (AR) and 3-D modeling that embraces the concept of home design, architecture and mechanical designing process. This study connects all users of relevant concerns to an augmented reality 's user-intensive design. The paper provides you with the existential complexity of how the AR can be implemented to enhance the work of architects and designers . The proposed application shows two types of reality , marker-less and more marker-based. The new feature of the project is that no expensive devices are required. It can be used easily through smartphones and tablets. This is a cost-effective solution that mainly reduces the overhead accosted daily by, mechanical designers , interior designers and architects. The software displays all the features that mechanical designers , interior designers and architects may need.

SciVal Topic Prominence

Topic: Design | Augmented reality | Virtual reality

Prominence percentile: 70.397

Author keywords

3D visualizer | Architects | Augmented reality | Interior designers | Workspace

ISSN: 25024752
Source Type: Journal
Original language: English
DOI: 10.11591/ijeecs.v17.i2.pp834-844
Document Type: Article
Publisher: Institute of Advanced Engineering and Science

Metrics

View all metrics ›

PlumX Metrics

Usage, Captures, Mentions, Social Media and Citations beyond Scopus.

Cited by 0 documents

Inform me when this document is cited in Scopus:

Set citation alert ›

Set citation feed ›

Related documents

Augmented Reality Application for Architects and interior designers: Interno A cost effective solution

Nasir, S. , Zahid, M.N. , Khan, T.A.
(2019) 2018 IEEE 5th International Conference on Smart Instrumentation, Measurement and Application, ICSIMA 2018

Displaying product manufacturing information in augmented reality for inspection

Urbas, U. , Vrabič, R. , Vukašinović, N.
(2019) Procedia CIRP

A method of motion-based immersive design system for vehicle occupant package

Wan, J. , Wang, N.
(2018) Proceedings of the ASME Design Engineering Technical Conference

View all related documents based on references

Find more related documents in Scopus based on:

Authors › Keywords ›

References (26)

View in search results format >

All | Export | Print | E-mail | Save to PDF | Create bibliography

1 Milgram, P., Takemura, H., Utsumi, A., Kishino, F.
Telemanipulator and Telepresence Technologies. Cited 182 times.

2 Klein, G., Murray, D.
Parallel tracking and mapping on a camera phone

(2009) *Science and Technology Proceedings - IEEE 2009 International Symposium on Mixed and Augmented Reality, ISMAR 2009*, art. no. 5336495, pp. 83-86. Cited 302 times.
ISBN: 978-142445390-0
doi: 10.1109/ISMAR.2009.5336495

3 Nee, A.Y.C., Ong, S.K., Chryssolouris, G., Mourtzis, D.
Augmented reality applications in design and manufacturing

(2012) *CIRP Annals - Manufacturing Technology*, 61 (2), pp. 657-679. Cited 275 times.
doi: 10.1016/j.cirp.2012.05.010

4 Jani, B.Y., Dahale, P., Nagane, A., Sathe, B., Wadghule, N.
Interior design in augmented reality environment
(2015) *International Journal of Advanced Research in Computer and Communication Engineering*, 4 (3), pp. 286-288. Cited 2 times.
Prof. Mar

5 Buxton, W.A.S.
Living in augmented reality: Ubiquitous media and reactive environments
(1997) *Video Mediated Communication*, pp. 215-229. Cited 64 times.
Hillsdale, N.J.: Erlbaum

6 Tang, J.K.T., Lau, W.-M., Chan, K.-K., To, K.-H.
AR interior designer: Automatic furniture arrangement using spatial and functional relationships

(2014) *Proceedings of the 2014 International Conference on Virtual Systems and Multimedia, VSMM 2014*, art. no. 7136652, pp. 345-352. Cited 8 times.
ISBN: 978-147997227-2
doi: 10.1109/VSMM.2014.7136652

7 Azuma, R.T.
The challenge of making augmented reality work outdoors
(1999) *Mixed Reality*, pp. 379-390. Cited 57 times.

8 Matsuoka, H., Onozawa, A., Hosoya, E.
Environment mapping for objects in the real world: A trial using ARToolKit

(2002) *ART 2002 - 1st IEEE International Augmented Reality Toolkit Workshop, Proceedings*, art. no. 1107006. Cited 9 times.
ISBN: 0780376803; 978-078037680-9
doi: 10.1109/ART.2002.1107006

9 Khairnar, K.
Furniture layout application based on marker detection and using augmented reality
(2015) *International Research Journal of Engineering and Technology (IRJET)*, 2 (7), pp. 540-544. Cited 6 times.

10 Merrell, P., Schkufza, E., Li, Z., Koltun, V., Agrawala, M.
Interactive Furniture Layout Using Interior Design Guidelines
(2011) *ACM Transactions on Graphics*, 30 (4), pp. 1-10. Cited 39 times.
doi: 10.1145/2010324.1964982

11 Guerin, D.A.
Issues Facing Interior Design Education in the Twenty-First Century
(1991) *Journal of Interior Design*, 17 (2), pp. 9-16. Cited 21 times.
doi: 10.1111/j.1939-1668.1991.tb00033.x

12 Ahlers, K.H., Kramer, A., Breen, D.E., Chevalier, P.-Y., Crampton, C., Rose, E., Tuceryan, M., (...), Greer, D.
Distributed Augmented Reality for Collaborative Design Applications
(1995) *Computer Graphics Forum*, 14 (3), pp. 3-14. Cited 33 times.
doi: 10.1111/j.1467-8659.1995.cgf143_0003.x

13 Phan, V.T., Choo, S.Y.
Interior design in augmented reality environment
(2010) *International Journal of Computer Applications*, 5, pp. 16-21. Cited 15 times.
Aug

14 Kato, H., Billinghurst, M., Poupyrev, I., Imamoto, K., Tachibana, K.
Virtual object manipulation on a table-top AR environment
(2000) *Proceedings - IEEE and ACM International Symposium on Augmented Reality, ISAR 2000*, art. no. 880934, pp. 111-119. Cited 386 times.
ISBN: 0769508464; 978-076950846-7
doi: 10.1109/ISAR.2000.880934

15 Dickinson, J.I., Marsden, J.P., Read, M.A.
Empirical design research: Student definitions, perceptions, and values
(2007) *Journal of Interior Design*, 32 (2), pp. 1-12. Cited 10 times.
doi: 10.1111/j.1939-1668.2006.tb00309.x

16 Menk, C., Jundt, E., Koch, R.
Visualisation techniques for using spatial augmented reality in the design process of a car
(2011) *Computer Graphics Forum*, 30 (8), pp. 2354-2366. Cited 13 times.
http://www.blackwell-synergy.com/loi/CGF
doi: 10.1111/j.1467-8659.2011.02066.x

17 Nee, A.Y.C., Ong, S.K., Chryssolouris, G., Mourtzis, D.
Augmented reality applications in design and manufacturing

(2012) *CIRP Annals - Manufacturing Technology*, 61 (2), pp. 657-679. Cited 275 times.
doi: 10.1016/j.cirp.2012.05.010

18 Menk, C., Jundt, E., Koch, R.
Evaluation of geometric registration methods for using spatial augmented reality in the automotive industry

(2010) *VMV 2010 - Vision, Modeling and Visualization*, pp. 243-250. Cited 5 times.
ISBN: 978-390567379-1
doi: 10.2312/PE/VMV/VMV10/243-250

19 Meola, A., Cutolo, F., Carbone, M., Cagnazzo, F., Ferrari, M., Ferrari, V.
Augmented reality in neurosurgery: a systematic review

(2017) *Neurosurgical Review*, 40 (4), pp. 537-548. Cited 65 times.
link.springer.de/link/service/journals/10143/index.htm
doi: 10.1007/s10143-016-0732-9

20 Palmarini, R., Erkoyuncu, J.A., Roy, R., Torabmostaedi, H.
A systematic review of augmented reality applications in maintenance

(2018) *Robotics and Computer-Integrated Manufacturing*, 49, pp. 215-228. Cited 96 times.
doi: 10.1016/j.rcim.2017.06.002

21 Dacko, S.G.
Enabling smart retail settings via mobile augmented reality shopping apps

(2017) *Technological Forecasting and Social Change*, 124, pp. 243-256. Cited 60 times.
www.elsevier.com/inca/publications/store/5/0/5/7/4/0/
doi: 10.1016/j.techfore.2016.09.032

22 Marchand, E., Uchiyama, H., Spindler, F.
Pose Estimation for Augmented Reality: A Hands-On Survey

(2016) *IEEE Transactions on Visualization and Computer Graphics*, 22 (12), art. no. 7368948, pp. 2633-2651. Cited 121 times.
http://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=2945
doi: 10.1109/TVCG.2015.2513408

23 Wang, Y., Zhang, S., Wan, B., He, W., Bai, X.
Point cloud and visual feature-based tracking method for an augmented reality-aided mechanical assembly system

(2018) *International Journal of Advanced Manufacturing Technology*, 99 (9-12), pp. 2341-2352. Cited 7 times.
http://www.springerlink.com/content/0268-3768
doi: 10.1007/s00170-018-2575-8

24 Jain, P., Manweiler, J., Choudhury, R.R.

OverLay: Practical mobile augmented reality

(2015) *MobiSys 2015 - Proceedings of the 13th Annual International Conference on Mobile Systems, Applications, and Services*, pp. 331-344. Cited 58 times.
ISBN: 978-145033494-5
doi: 10.1145/2742647.2742666

25 Maurer, T., Cook, K., Graybeal, J.

Counter-mine augmented reality training system (CMARTS)

(2019) *Proceedings of SPIE - The International Society for Optical Engineering*, 11012, art. no. 1101210.
http://spie.org/x1848.xml
ISBN: 978-151062689-8
doi: 10.1117/12.2518120

26 Ahmed, S.F., Banky, G., Blicblau, A., Joyo, M.K.

Augmented reality with Haptic technology based online experimental based distance learning education technique

(2016) *AIP Conference Proceedings*, 1775, art. no. 030068.
http://scitation.aip.org/content/aip/proceeding/aipcp
ISBN: 978-073541433-4
doi: 10.1063/1.4965188

Kadir, K.; Department of Electrical and Electronic Engineering, British Malaysian Institute, Universiti Kuala Lumpur, Batu 8, Jalan Sungai Pusu, Selangor, Malaysia; email:kushsairy@unikl.edu.my