

Designing an Orthotic Insole by Using Kinect® XBOX Gaming Sensor Scanner and Computer Aided Engineering Software

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Abstract. Healthcare and medical is one of the most expensive field in the modern world. In order to fulfil medical requirement, this study aimed to design an orthotic insole by using Kinect Xbox Gaming Sensor Scanner and CAE softwares. The accuracy of the Kinect® XBOX 360 gaming sensor is capable of producing 3D reconstructed geometry with the maximum and minimum error of 3.78% (2.78mm) and 1.74% (0.46mm) respectively. The orthotic insole design process had been done by using Autodesk Meshmixer 2.6 and Solidworks 2014 software. Functionality of the orthotic insole designed was capable of reducing foot pressure especially in the metatarsal area. Overall, the proposed method was proved to be highly potential in the design of the insole where it promises low cost, less time consuming, and efficiency in regards that the Kinect® XBOX 360 device promised low price compared to other digital 3D scanner since the software needed to run the device can be downloaded for free.

