

## **DESIGN FOR MEASUREMENT TOOL OF OVERBITE AND OVER JET MALOCCLUSION**

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### ***ABSTRACT***

Recently, dentistry needs modern technology to be able to support dentist's performance. Until now, measuring the overbite and overjet malocclusion is done manually, i.e. by making denture model with alginate material, and is measured with digital caliper. This is, of course, less effective for dentist because it takes time and needs accuracy in its every measurement. Considering the background, the researchers tried to make the design for measurement tool of overbite and overjet malocclusion to make the dentist's performance easier. This tool was designed using Flex sensor that detected angular curvature caused by bite style and ATmega328 as data processor. In the tool testing, the researchers compared the result of the prototype by conducting manual measurement by using digital caliper in order to find the error value. Based on the tool testing, the result was that prototype worked well and had value error of 0.01% to measure overbite. Meanwhile, the error value for overjet measurement was 0.02%.

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**Keywords: Malocclusion, Overbite, Overjet, Digital Caliper, Flex Sensor, ATmega328, Microcontroller.**