

Proyecto de Investigación de cotizador automático por medio de ChatBots

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Abstract— En ésta investigación se abordará la integración de programas con capacidad de interactuar por medio de texto con usuarios humanos, conocidos como ChatBot's, para la automatización del proceso de cotización de productos y servicios a través de Internet, en específico, del servicio de Impresión 3D y manufactura aditiva. A través de la creación de un ChatBot para interactuar en Telegram y Facebook desarrollado en Node-RED, una plataforma de programación visual que permite integrar diferentes servicios WEB a través de API's y control de Hardware facilmente, permitiendo administrar también el flujo de trabajo de una granja de impresoras 3D.

Keywords: ChatBot, Node-RED, Cotizador automático, Impresión 3D.

I. INTRODUCCION

In recent decades,... This paper is organized as follows. In Section II, ... In Section IV... Some simulations in Section VI. Finally, the conclusions are presented in Section VII.

II. HOMOTOPIC CONTINUATION METHOD

Homotopy continuation method..

$$V = I * R : \mathbb{R}^n \longrightarrow \mathbb{R}^n, \quad (1)$$

The system:

$$H(x, \lambda) = \lambda f(x) + (1 - \lambda)(f(x) - f(x_0)) = 0, \quad (2)$$

where, λ is the homotopy parameter, x_0 is the starting point, $H(x, \lambda) : \mathbb{R}^{n+1} \longrightarrow \mathbb{R}^n$, $x \in \mathbb{R}^n$.

III. OBSTACLES

HPPM uses the...

IV. SPHERICAL

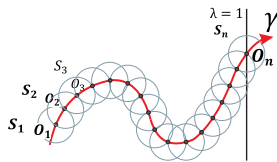


Figure 2: Seguimiento.

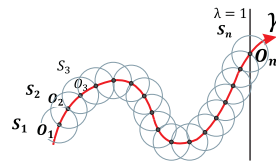


Figure 3: Seguimiento.

Figure 1: Imagen de prueba

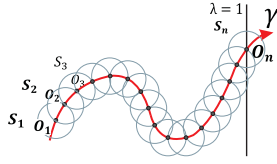


Figure 4: Seguimiento.

Predictor-Corrector Scheme

A proper [1] predictor-corrector Figure 4 scheme [2], [3]...

V. EXPERIMENTS

The efficiency of the [4] proposed...

A. Successful path for maps with 200 and 2000 obstacles

We consider two study cases...

N.Obstacles	Environment maps							
	200				2000			
Path	1	2	3	4	1	2	3	4
Steps	919	898	894	999	7165	6404	7406	6953
Time (ms)	504	483	504	564	41190	38840	48561	39305
Path length	2.10143	2.06822	2.01062	2.2497	2.59544	2.20463	2.57591	2.40284

Table I: Computation time and length in normalized units for two environment maps.

VI. CONCLUSIONS

In this work,...

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