



BP-04: An automatic system for diabetes and thyroid screening

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Abstract

Screening is the first step in detecting the presence of a disease at an early stage in people who are apparently healthy and who do not yet show any apparent symptoms. Screening has become more faster and automatic thanks to the use of Bioinformatics. This later is a set of IT resources (hardware and software) and artificial intelligence techniques for the automatic processing of biological data.

This project presents an automatic screening system for the two autoimmune diseases diabetes and thyroid in order to self-diagnose diseases as soon as possible in order to treat it quickly and thus slow down or stop its progression. We have choosing these two diseases for several reasons; Diabetes is one of the most common autoimmune diseases today. In addition, this disease increases the risk of developing other diseases such as Hashimoto's thyroiditis.

Our system is an inference engine composed of three different complementary modules, a fact base and a knowledge base. It is fully implemented in JAVA programming language using php Myadmin as a database system.

Our system is based on an epidemiological study established on diabetic and Hashimoto's thyroiditis patients.

Key words: Bioinformatics, artificial intelligence, screening, diabetes, thyroid.