

Universiti Teknologi MARA

**Dengue Classification System Using
Clonal Selection Algorithm**

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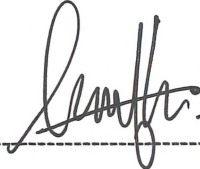
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DECLARATION

I certify that this thesis and the research to which it refers are the product of my own work and that any ideas or quotation from the work of other people, published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline.

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ABSTRACT

Dengue remains to be significant public health concern in tropical climate country including Malaysia. As the number of dengue cases is increasing faster in Malaysia, more work need to be done in order to prevent it. Dengue classification and detection system will classify if a person have dengue or not based on symptoms. This project focused on three main objectives: to investigate dengue data and Clonal Selection Algorithm for classification of Dengue, to design and develops Clonal Selection Classification System (CSCS) and to evaluate Clonal Selection Classification System symptoms. Some popular intelligent techniques like Genetic Algorithm, Fuzzy Logic and Artificial Neural Network are often used by reasearcher to perform classification problems. At this point, Artificial Immune System(AIS) is one of the inspired biology technique which provide effective solutions for optimization and classificaton problems. One of AIS Algorithm is Clonal Selection Algorithm (CSA) is to classify dengue disease is a suitable to solve classification problem in this project . The rules generated from the training of the dengue data are embedded in the prototype of the classification system. Some of the dengue data are used to test the dengue classification system to produce the classification accuracy. The expected end is to automatically generate dengue classification. The evaluation conducted in this project has shown a promising accuracy. This project can be improved by making a comparative study on Artificial Immune System and other techniques or algorithms used to solve dengue classification problems.

Keywords – artificial immune system, clonal selection algorithm, dengue.

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