**Text

Description automatically generated**

**Graph Algorithms on DFAs**

Data Structures and Algorithms 2, Course Project 2022

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B.Sc. (Hons) Artificial Intelligence

Study-unit: **Data Structures and Algorithms 2**

Code: **ICS2210**

Lecturer: **Kristian Guillaumier**

**FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY**

Declaration

Plagiarism is defined as “the unacknowledged use, as one's own, of work of another person, whether or not such work has been published, and as may be further elaborated in Faculty or University guidelines" (University Assessment Regulations, 2009, Regulation 39 (b)(i), University of Malta).

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(N. B. If the assignment is meant to be submitted anonymously, please sign this form and submit it to the Departmental Officer separately from the assignment).

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Student Name Signature

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# Statement of completion

|  |  |
| --- | --- |
| **Item** | **Completed (Yes/No/Partial)** |
|  | |
| Created a random DFA |  |
| Correctly computed the depth of the DFA |  |
| Correctly implemented DFA minimization |  |
| Correctly computed the depth of the minimized |  |
| Correctly implemented Tarjan’s algorithm |  |
| Printed number and size of SCCs |  |
| Provided a good discussion on Johnson’s algorithm |  |
| Included a good evaluation in your report |  |

# Discussion

## Strongly connected components (SCCs)

## Johnson’s algorithm

# Evaluation

# Testing & Results