OMIS 670 – Spring 2023  
Assignment 1: Build a Network in NodeXL  
Available Date: 2/7/2023  
Due Date: **2/14/2023** at **11:59 PM** on **Blackboard**  
Instructor: Dr. Amin Vahedian

Consider the following data on LinkedIn endorsement activity:

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| **Endorsement By** | **The Endorsed** | **Skill** |
| Ann | Patrick | R Programming |
| Nick | Xun | Python Programming |
| Lisa | Bhupesh | Python Programming |
| Nick | Patrick | R Programming |
| Xun | Nick | Python Programming |
| Bhupesh | Ann | R Programming |
| Xun | Ann | R Programming |
| Patrick | Lisa | C++ Programming |
| Patrick | Ann | R Programming |
| Ann | Bhupesh | R Programming |
| Patrick | Nick | R Programming |

Consider each person to be a vertex in a social network. Do the following tasks:

* Define an explicit, directed connection between the vertices. Build the network resulting from this definition in NodeXL. Place your answers in the following table (3 points).

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| **Connection Definition:**  *Consider the Endorsement and The endorsed as vertices A and B.*  *There is a link for A to B, If A endorses B for the Skill* |
| **Screenshot of the Network:** |

* Define two different implicit, undirected connections between the vertices. Build the two networks resulting from this definition in NodeXL. Place your answers in the following tables (6 points).

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| **Connection Definition:**  *There is a link between A and B, if they have endorsed for same skill* |
| **Screenshot of the Network:** |

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| **Connection Definition:**  There is a link between A and B, if they have endorsed someone to the same Skill |
| **Screenshot of the Network:** |

Note: For all the networks, use Fruchterman-Reingold layout with the following parameters:

* Strength of the repulsive force between vertices: **1.5**
* Iterations per layout: **20**