**Assignment 3**

**Course:** DSA555 (Data Structures and Algorithms)

**Professor:** Bradly Hoover

**Topic:** Dijkstra's algorithm

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**Outline:**

1. Intro

* Plan of presentation
* History
* The problem statement and real life examples.

1. The Algorithm Explanation

* Audience will pick up nodes with weight
* Terminology / Initialization / Algorithm
* Solve the problem step by step with graph
* Show code and Graph
* Analyze runtime
* Advantages / Disadvantages
* Improvements (Implementation using heap/priority queue + use adjacency list)

1. Sources

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* Misa, Thomas J. "An Interview with Edsger W. Dijkstra." Communications of the ACM Commun. ACM 53.8 (2010): 41-43. Web.
* Schrijver, Alexander. “Combinatorial Optimization — Polyhedra and Efficiency” Algorithms and Combinatorics. 24 (2004): 103. Web.
* Thorup, Mikkel. "On RAM priority Queues". SIAM Journal on Computing. 30.1 (2000): 86–109. Web.
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