



University of Dhaka
Department of Computer Science and Engineering

Experimental Result
CSE-4111: Artificial Intelligence Lab
Lab 1: Informed Search

Team Members

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Problem 1:

Best First Search, A Star and Weighted A* Implementation

Time Comparison:

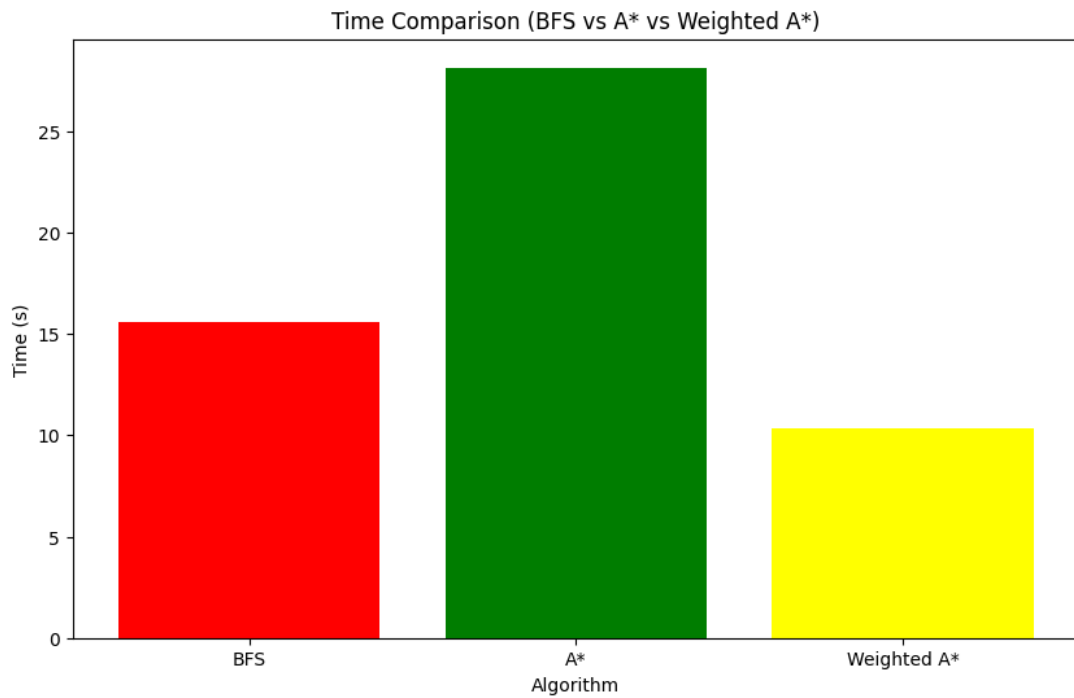


Fig 1.1: Time Comparison among Best First Search, A Star and Weighted A Star algorithm

Memory Comparison:

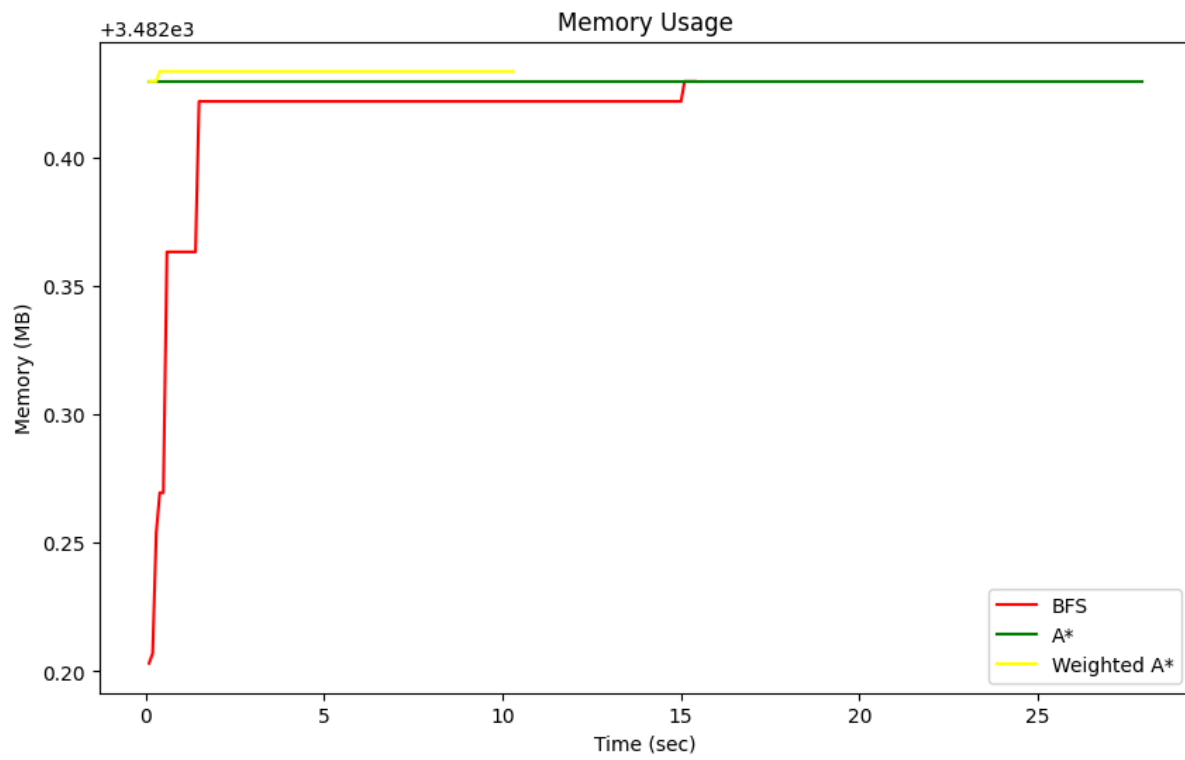


Fig 1.2: Memory Usage by Algorithms over time

Routes:

Best First Search: RED LINE

A Star: GREEN LINE

Weighted A Star: BLUE

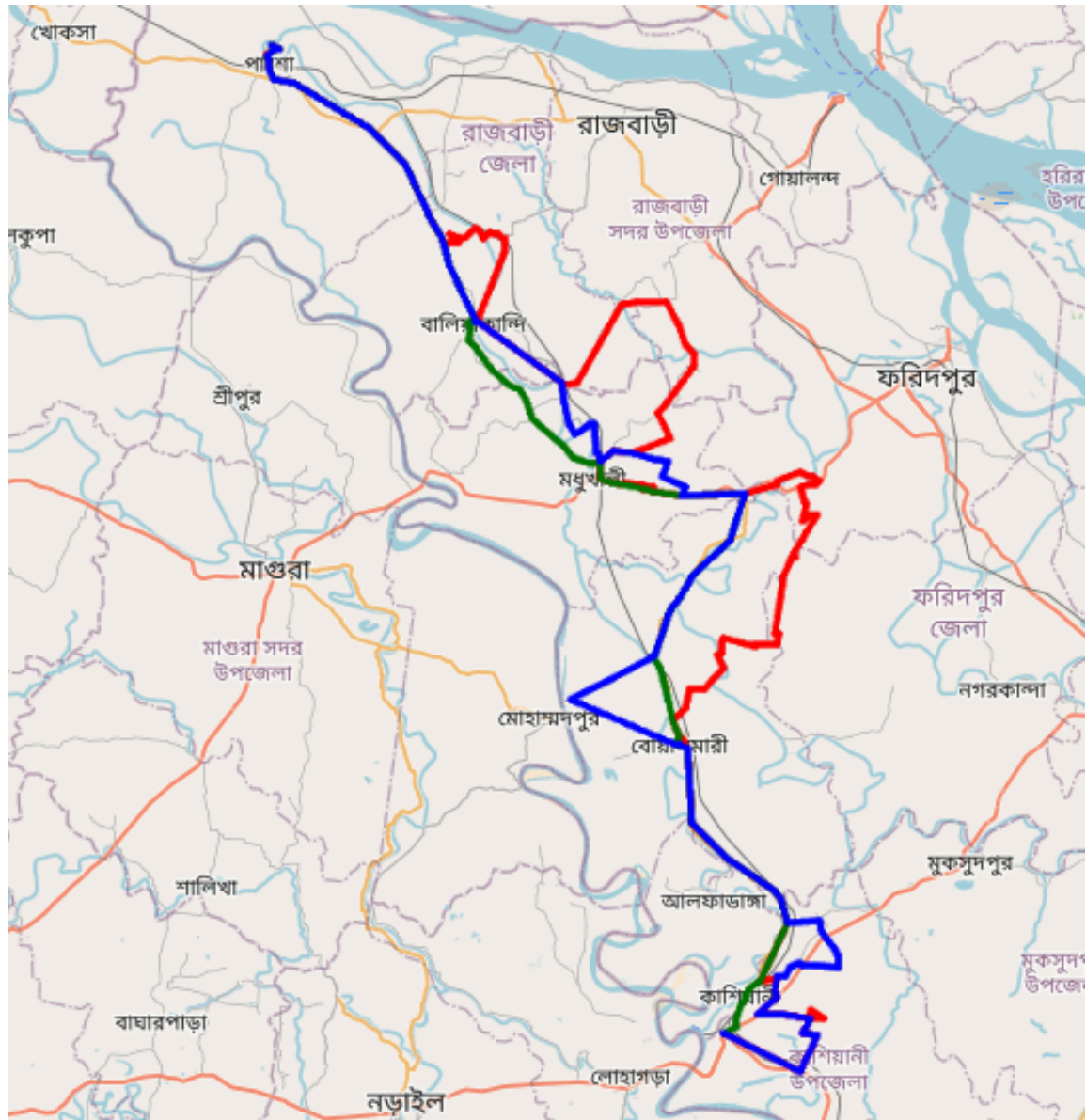


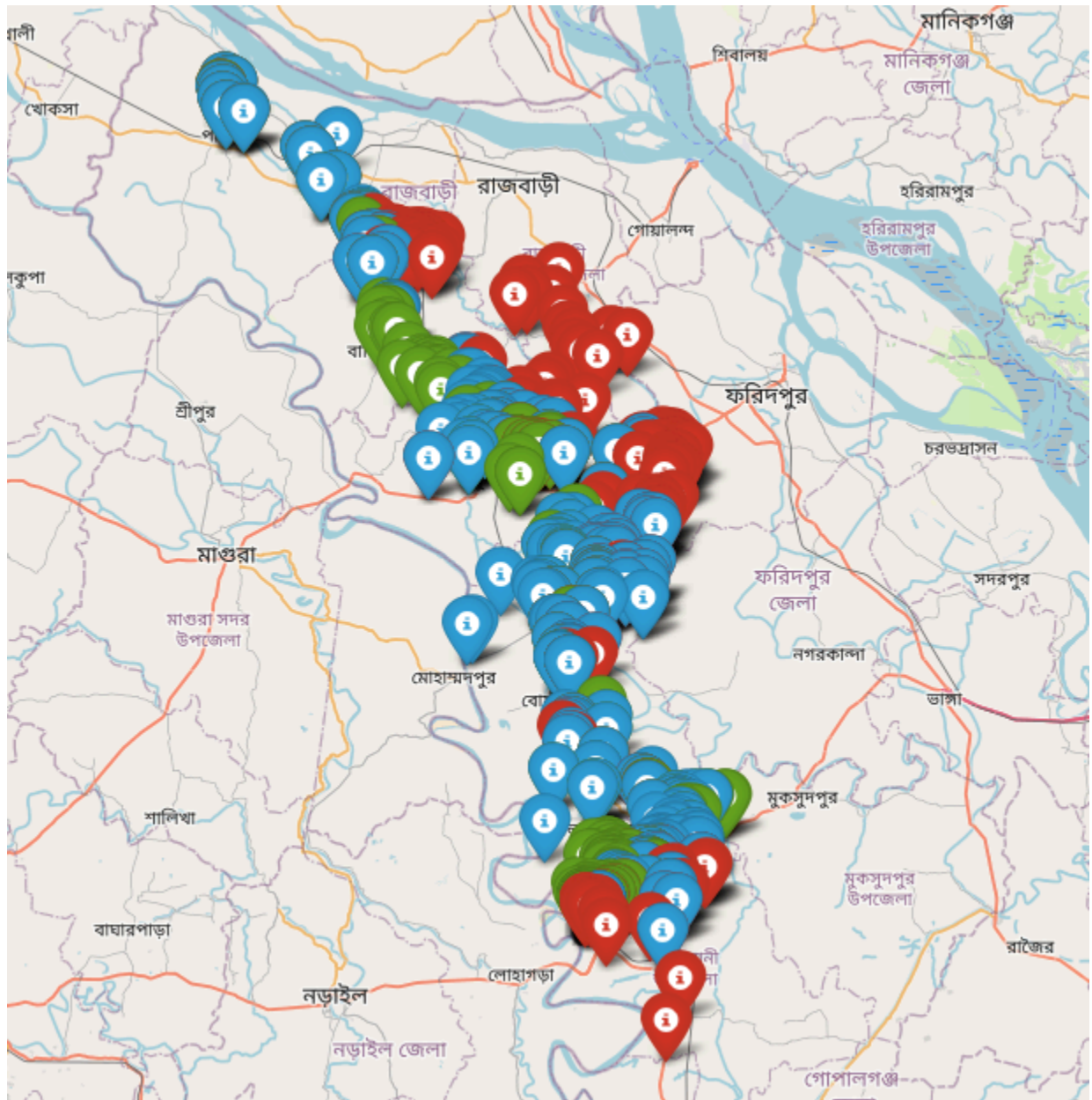
Fig 1.3: Suggested Routes, Best First Search(Red), A Star(Green),
Weighted A Star(Yellow)

Hit Map:

Best First Search: **RED LINE**

A Star: **GREEN LINE**

Weighted A Start: **BLUE**



Problem 2:

Searching about a famous person on Google and summarizing about the person. Searching will be in two different order, DFS and BFS.

Search Sentence: Albert Einstein

DFS SUMMARY:

Number of sentences sent: 739

Most Frequent Words:

[('Einstein', 264), ('p.', 65), ('theory', 47), ('time', 42), ('quote', 42)]

[('Einstein', 1.0), ('p.', 0.246212121212122), ('theory', 0.178030303030304), ('time', 0.1590909090909091), ('quote', 0.1590909090909091)]

Summary:

The text delves into the scientific and philosophical perspectives of Albert Einstein, highlighting his unique approach to understanding the universe. It emphasizes his relentless pursuit of fundamental truths, leading him to question established theories and seek out unsettling situations. While his colleagues made progress by exploiting existing ideas, Einstein aimed to transcend them, resulting in his aloofness from the applications of quantum theory. The author discusses Einstein's attempt to introduce a cosmological constant to create a static universe model, which later proved obsolete with the discovery of the universe's expansion. It also mentions Einstein's understanding of general relativity's central concepts before developing the detailed equations. Additionally, the text explores Einstein's perspective on capitalism, arguing that the owner of the means of production determines the worker's payment based on minimum needs and labor requirements, not the value of the product. Lastly, the author suggests that Einstein's scientific approach can be seen as a form of induction, where he updated his model of physical law based on observations, effectively reasoning on a higher level across a broader domain.

BFS SUMMARY:

Most Frequent Words:

[('Einstein', 323), ('Albert', 75), ('theory', 54), ('identifiersArticles', 47), ('relativity', 34)]

[('Einstein', 1.0), ('Albert', 0.232), ('theory', 0.167), ('identifiersArticles', 0.145), ('relativity', 0.105)]

Summary:

Einstein's College of Medicine, founded in 1953, is renowned for its commitment to medical education, biomedical research, and patient care. It has over 2,000 full-time faculty, 737 M.D. students, and 209 Ph.D. students. The college has a long history of innovation, being among the first to integrate bedside experience with learning, develop bioethics as an academic discipline, and establish a residency program in internal medicine with a focus on women's

health. Its research programs have received significant funding from the National Institutes of Health, with a focus on aging, developmental brain research, cardiac disease, and ethnic and racial health disparities. The college's partnership with Montefiore Medical Center enhances clinical and translational research, leading to accelerated adoption of new discoveries for patient treatments. With its dedication to excellence in education, research, and patient care, Einstein's College of Medicine continues to be a leader in healthcare and medical education.