

CS622A
ADVANCED COMPUTER ARCHITECTURE
PROJECT PROPOSAL

Evaluating Data Prefetching techniques from DPC3

GROUP 16

Aditya Rohan
160053

Aniket Pandey
160113

Instructor:
Dr. Mainak Chaudhury

September 30, 2019



1 Problem Statement

In this project, we aim to evaluate and contrast all the submissions of the **3rd Data Prefetching Championship** (DPC3). This will serve as a starting point for any future work (beyond the course) that we intend to do by identifying the key differences in all techniques. We aim to get necessary insights from the performance of various prefetching algorithms to aid us in our own research.

2 Expected Outcomes

The expected outcome would be an exhaustive analysis of all prefetching algorithms against the provided traces by the organizing committee, as well some traces created by us.

We would try to understand the differences in results and causes of misperformance of certain algorithms against various traces.

3 Tools to Use

1. **Champsim** An architectural simulator which was originally used for DPC2/3.
2. **Pin 3.2** A binary instrumentation tool which will be used to create custom traces.