

Information Track Proposal

Motivation

The 21st century world of computing that our students are surrounded by is a world of limitless information. Data, in myriad forms ranging from structured data through to various sorts of unstructured data, is linked together, extracted, processed, mashed, and recombined in myriad ways. Against this backdrop, the conventional divisions of the department into Theory, Systems, and AI seem somewhat antiquated. This track is an attempt to synthesize topics from all three areas that pertain to processing and understanding digital information in the modern world.

Proposed Information Track Requirements:

All required track classes must be taken for at least 3 units each (if the class provides the option to take it for variable units).

- a) CS124, CS145

Note: CS124: From Languages to Information
(*new course by Dan Jurafsky and Chris Manning*)

- b) Two courses, which must be from *different* areas from the options below:

- i. *Information-based AI Applications*

CS224N: Natural Language Processing, CS224S: Speech Recognition and Synthesis, CS229: Machine Learning

- ii. *Database and Information Systems*

CS140: Operating Systems and Systems Programming, CS240D: Distributed Storage Systems, CS245: Database System Principles, CS345A: Data Mining, CS345C: Data Integration, CS346: Database Implementation, CS347: Distributed database

- iii. *Information Systems in Biology*

CS262: Computational Genomics, CS270: Biomedical Informatics, CS274: Introduction to Biocomputation

- iv. *Information Systems on the Web*

CS276 Information Retrieval, CS364B Sponsored Search, CS1xx Internet Algorithmics

Note: CS1xx: Internet Algorithmics

(*new course to be introduced in the future by Rajeev Motwani*)

Information Track Additional Electives:

Students in the Information track may, in addition to the standard set of approved CS elective courses, also count any courses from category (b) above as elective courses.

Authors

This track was developed by Serafim Batzoglou, Hector Garcia-Molina, Christopher Manning, Rajeev Motwani, and Jennifer Widom