Graphs in Machine Learning

Introduction to Graphs in ML

Course Overview and Motivation

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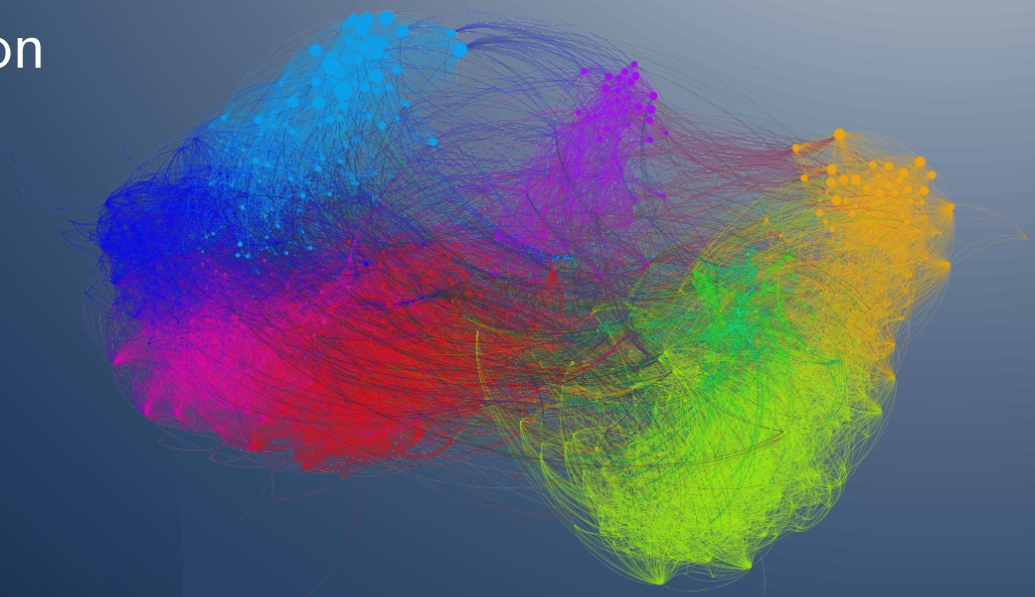
Partially based on material by: Andreas Krause, Branislav Kveton, Michael Kearns



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Concepts, tools

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One example: Online Semi-Supervised Face Recognition

Two (main) sources of graphs in ML

Natural graphs as models for networks

Constructed graphs as nonparametric basis

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Constructed graphs as nonparametric basis

- we create (learn) the similarity structure from flat data
- it's a tool (e.g., nonparametric regularizer) to encode structural properties (e.g., independence, . . .)

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https://misovalko.github.io/mva-ml-graphs.html