L’outil de classification, relation betweenness et coupe, composantes connexes, étude des coûts

Stage Casser des Graphes

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Complex Networks - LIP6

Outline

L’outil de classification

Relation Betweenness et Coupe

Composantes Connexes

étude des coûts

L’outil de classification

Description

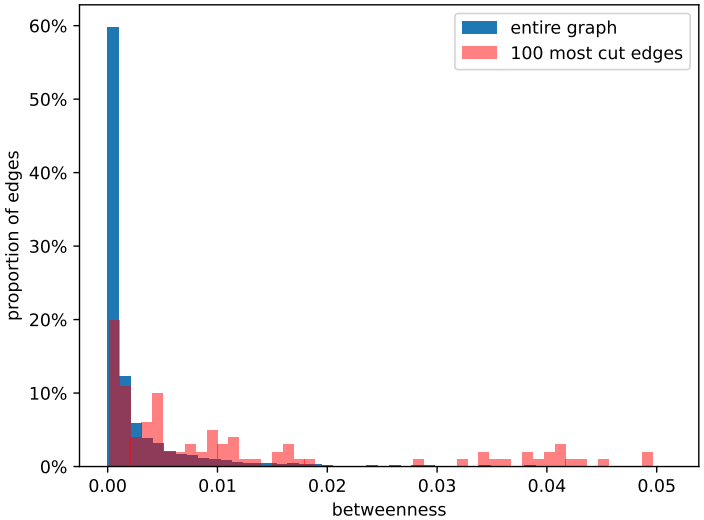
On veut pouvoir distinguer les coupes vraiment différentes visuellement
Plusieurs niveaux d'approche:

- les critères (notion de distance entre deux coupes)
  - intersection
  - distance dans le graphe
  - distance géographique
  - distance géométrique
- la méthode (comment ensuite trier en fonction des critères)
  - méthodes maisons (représentant, division)
  - clustering du graphe des distances

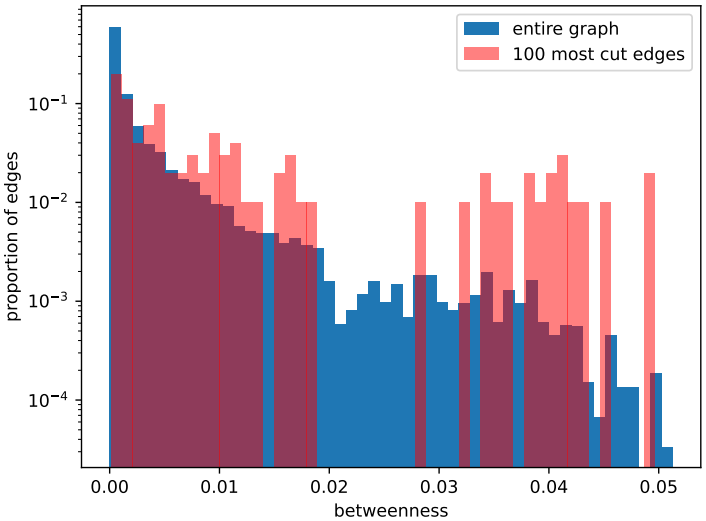
Résultats

Relation Betweenness et Coupe

Betweenness distribution entire graph vs 100 most cut edges (1)



Betweenness distribution entire graph vs 100 most cut edges (2)



Composantes Connexes

Les étranges composantes connexes

- quasiment toutes de taille 28
- si on les compare en enlevant les deux plus grandes composantes:

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étude des coûts

Différents attributs et leur présence

- (n_1, n_2) 100%
- width 3%
- maxspeed 95%
- oneway 100%
- lanes 51%
- bridge 2%
- tunnel 1%
- highway 100%
- access 7%
- reversed 1%
- ref 6%
- junction 0.5%
- service 0.01%
- length
- name
- v_original
- u_original
- osmid

Quelques idées de coûts

- width
- $width^2$
- width with maxspeed 50
- width without bridge
- width without tunnel
- random(min, max)
- random distribution