Neo4j at Dshini

Dshini®

Marktplatz   Deals   Wünsche   Games   Entertainment

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Dein Dshini

Werde Teil der größten & beliebtesten deutschen Seite im Web.

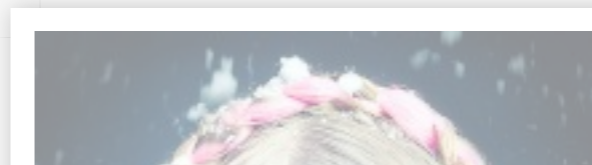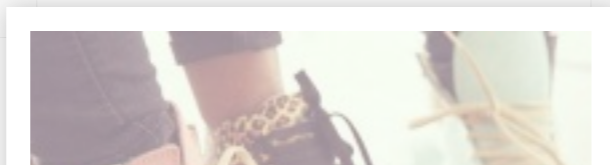Ich will Dabei sein

» mehr erfahren

SPRING season

Entdecke & teile Dinge die Du magst

» sammle Punkte   » geh shoppen   » spare bis zu 100%

Das mögen Nutzer

Spotlight ▼

Who am I?

- Klaus Großmann

- CTO at Dshini

- Mail: klaus@dshini.net

- Twitter: @iKlaus

- GitHub: iKlaus

Who are we?

- Dshini UG (haftungsbeschränkt)

- 2010 founded startup

- based in Weimar/TH Germany

- runs the social networking platform www.dshini.net

Why Neo4j?

- 2011 «Marketplace»-Project

- Recommendations?

- Schema-less data
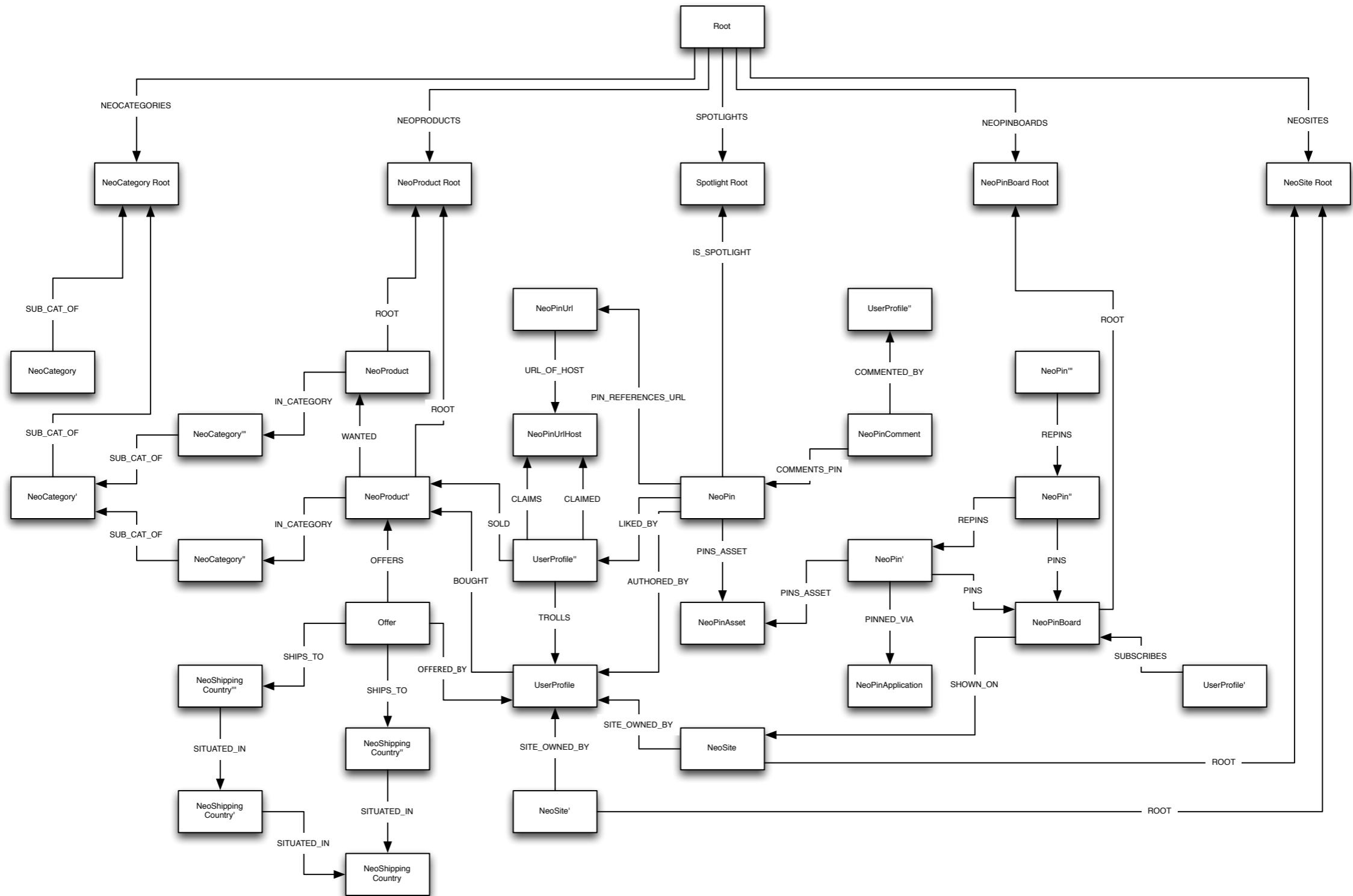
- REST-Interface

- Awesome Cypher-QL

11 Mio Nodes

57 Mio Properties

38 Mio Relationships

Dshini

Domain-Model

Root

NEOCATEGORIES · NEOPRODUCTS · SPOTLIGHTS · NEOPINBOARDS · NEOSITES

NeoCategory Root · NeoProduct Root · Spotlight Root · NeoPinBoard Root · NeoSite Root

IS_SPOTLIGHT

SUB_CAT_OF · ROOT · ROOT

NeoCategory · NeoPinUrl · UserProfile'' · NeoPin''''

SUB_CAT_OF · URL_OF_HOST · COMMENTED_BY · REPINS

NeoProduct · PIN_REFERENCES_URL

SUB_CAT_OF · NeoCategory''' · IN_CATEGORY · ROOT · NeoPinUrlHost · NeoPinComment · NeoPin''''

WANTED · COMMENTS_PIN

NeoCategory' · CLAIMS · CLAIMED · NeoPin · REPINS · NeoPin''

SUB_CAT_OF · IN_CATEGORY · SOLD · LIKED_BY · PINS_ASSET · PINS

NeoCategory'' · NeoProduct' · UserProfile'' · NeoPin' · NeoPinBoard

OFFERS · BOUGHT · AUTHORED_BY · PINS_ASSET · PINNED_VIA · PINS

Offer · NeoPinAsset · SHOWN_ON · SUBSCRIBES

SHIPS_TO · TROLLS · NeoPinApplication · UserProfile'

NeoShipping Country''' · SHIPS_TO · OFFERED_BY · UserProfile · SITE_OWNED_BY · ROOT

SITUATED_IN · NeoShipping Country'' · SITE_OWNED_BY · NeoSite

NeoShipping Country' · SITUATED_IN · NeoSite' · ROOT

SITUATED_IN · NeoShipping Country

SPOTLIGHTS   NEOPINBOARDS   NEOSITES

Spotlight Root   NeoPinBoard Root   NeoSite Root

IS_SPOTLIGHT

NeoPinUrl   UserProfile''   ROOT

URL_OF_HOST   COMMENTED_BY   NeoPin'''

PIN_REFERENCES_URL   REPINS

NeoPinUrlHost   NeoPinComment   NeoPin''

COMMENTS_PIN

CLAIMS   CLAIMED   NeoPin   REPINS

SOLD   LIKED_BY   PINS

UserProfile''   PINS_ASSET   NeoPin'

TROLLS   AUTHORED_BY   NeoPinAsset   PINS_ASSET   PINS   NeoPinBoard

UserProfile   PINNED_VIA   SUBSCRIBES

NeoPinApplication   SHOWN_ON   UserProfile'

SITE_OWNED_BY

SITE_OWNED_BY   NeoSite   ROOT

NeoSite'   ROOT

Pin-Model

Montag, 22. April 13

Dshini

Pins in the Graph

Pins in the Graph

Site

Follower

Followings

Level 46
★★★★★ (0)

Ralf Wipper

Wohnort	Weimar
Alter	32
Geschlecht	männlich
Beziehung	vergeben

Profil bearbeiten · Sichtbarkeit festlegen

Mein Status: 4 Tage her
was kann Bootstrap3

719 folgen mir **20** folge ich

Ralf Wipper Angebote Wunschzettel Folgen mir Folge ich

suchen:

2.421

Dshini

Pins in the Graph

Pins in the Graph

Site-Metas

Board

Pin-
Preview

```
// a site's boards
START n=node({STARTIDS})
MATCH n<-[:BOARD_SHOWN_ON]-boards
RETURN boards
ORDER BY boards.SortOrder?

// preview pins
START n=node({STARTIDS})
MATCH n<-[:PINS]-pins,
      pins-[:PINS_ASSET]->assets
RETURN pins, assets
ORDER BY pins.CreatedAt DESC
SKIP {QSKIP}
LIMIT {QLIMIT}
```

Dshini

Pins in the Graph

Pins in the Graph

Pin

Asset

Author

Repins

Likes

Comments

Comment

Retro 60s hair makeup

Laís Arósio
auf **Hairstyles**

Dshini
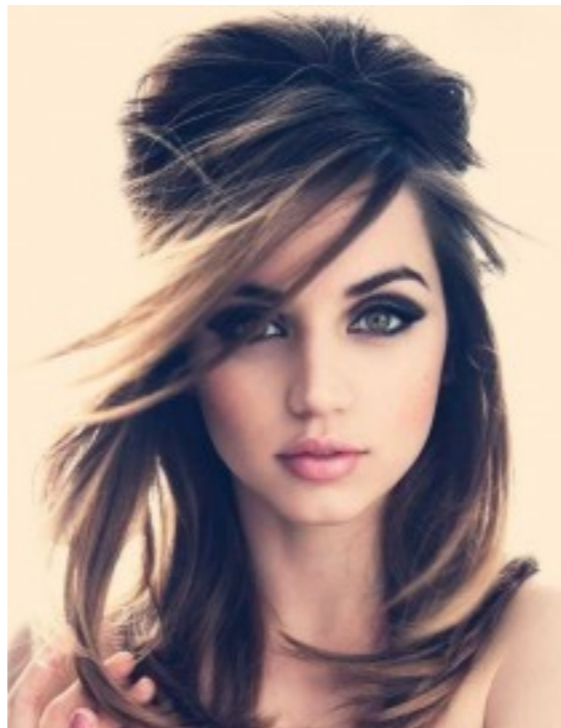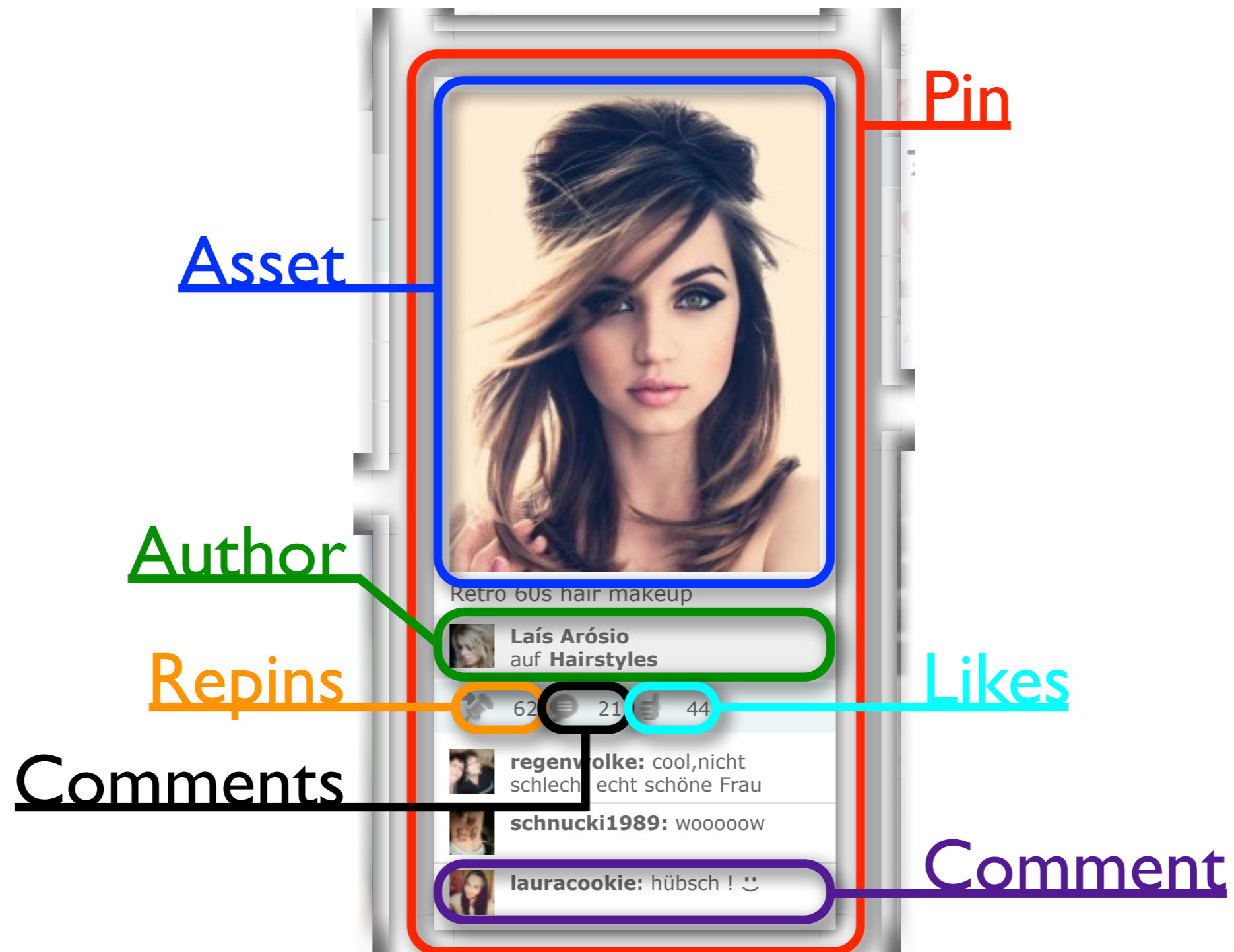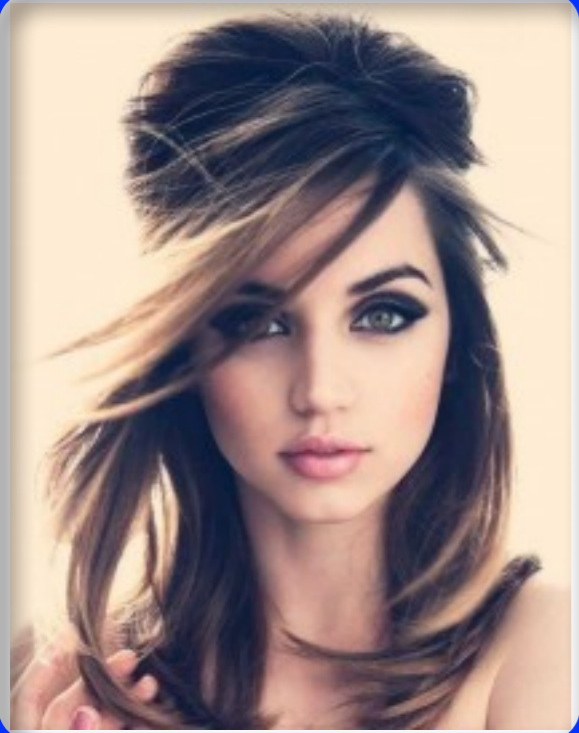
Pins in the Graph

Pins in «Spotlight» Category (staff picks)


```
START n=node:neo_root(RootOf = {ROOT}),
      current=node:user_profile(UserId = {USERID})
MATCH n<-[:IS_SPOTLIGHT]-pin
WHERE (pin.CreatedAt<{PINCREATEDAT})
WITH pin, current
ORDER BY pin.CreatedAt DESC
SKIP {QSKIP}
LIMIT {QLIMIT}
MATCH pin-[:AUTHORED_BY]->author,
      pin-[:PINS]->board,
      pin-[:PINS_ASSET]->asset
WHERE (NOT(author<-[:TROLLS]-current))
RETURN pin, author, board, asset
```
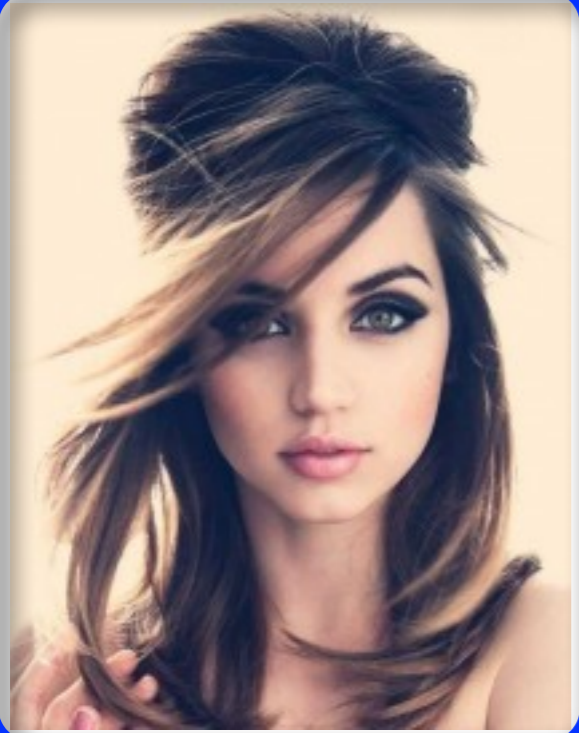
Pins in the Graph

Pins by a given category


```
START cat_board=node({CAT}),
      n=node(0)
MATCH cat_board<-[:SUB_BOARD_OF]-board
WITH board, n
MATCH board<-[:PINS]-pin-[:AUTHORED_BY]->author
WHERE (pin.CreatedAt<{PINCREATEDAT})
WITH pin, author, board, n
WHERE NOT(author<-[:TROLLS]-n)
WITH pin, author, board
ORDER BY pin.CreatedAt DESC
SKIP {QSKIP}
LIMIT {QLIMIT}
MATCH pin-[:PINS_ASSET]->asset
RETURN pin, author, board, asset
```

Pins in the Graph

Pins by a given users timeline

```
START n=node({STARTIDS})
MATCH n-[:SUBSCRIBES]->site,
      site<-[:BOARD_SHOWN_ON*0..1]-board
WITH board, n
MATCH board<-[:PINS]-pin-[:AUTHORED_BY]->author
WHERE (pin.CreatedAt<{PINCREATEDAT})
WITH pin, author, board, n
WHERE NOT(author<-[:TROLLS]-n)
WITH pin, author, board
ORDER BY pin.CreatedAt DESC
SKIP {QSKIP}
LIMIT {QLIMIT}
MATCH pin-[:PINS_ASSET]->asset
RETURN pin, author, board, asset,
       LENGTH(n<-[:LIKED_BY]-pin) > 0 AS has_liked
```
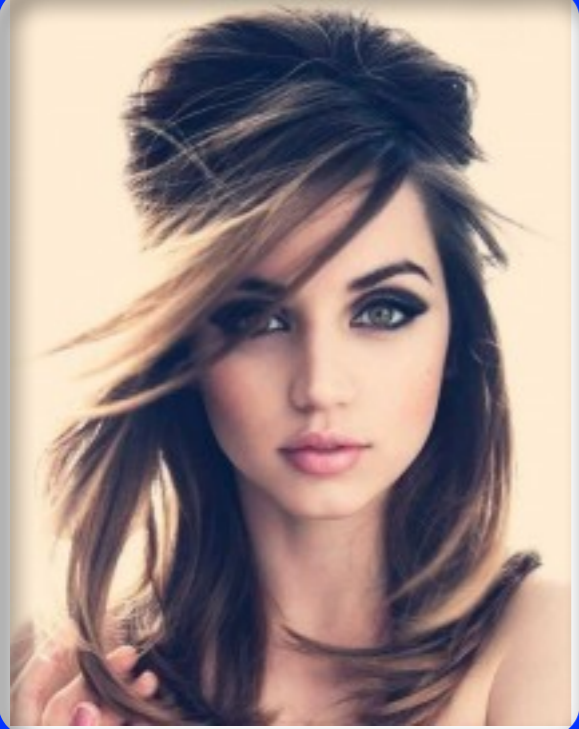
Retro 60s hair makeup

Laís Arósio
auf **Hairstyles**

Lessons learned

- OGM-layers are easy to use but hard to optimize

- lazy loading models costs performance

- query optimized secondary index-structures have to be planed from the beginning

- graphs are awesome!

That's it!

Thank you!

Questions?