Social Network Analysis for Computer Scientists

Frank Takes

LIACS, Leiden University https://liacs.leidenuniv.nl/~takesfw/SNACS

Week 13 — Code review

Frank Takes — SNACS — Week 13 — Code review

Where are we? ...

Now in 2nd course phase — the course project (60% of final grade)

- Course project **paper**
- Course project presentation
- Preliminary course project paper; a lot of good progress, and very nice project ideas.

Where are we? ...

Now in 2nd course phase — the course project (60% of final grade)

- Course project **paper**
- Course project presentation
- Preliminary course project paper; a lot of good progress, and very nice project ideas. Also: too many ChatGPT-generated full paragraphs.

Where are we? ...

Now in 2nd course phase — the course project (60% of final grade)

- Course project paper
- Course project presentation
- Preliminary course project paper; a lot of good progress, and very nice project ideas. Also: too many ChatGPT-generated full paragraphs.
- Upcoming sessions and deadlines
 - Dec 6 (today): code review session and lab session
 - Dec 13 (next week): no lecture, last lab session
 - Dec 15 (AoE): course project deadline (submit via Brightspace)



Tweet



Elon Musk 🤣 @elonmusk

Just leaving Twitter HQ code review

Tweet vertalen



10:28 a.m. · 19 nov. 2022 · Twitter for iPhone

...

Code review

- Peer review: evaluation of work by one or more individuals with similar competence
- **Code review**: peer review of programming code
- "Pair programming"
- Four eyes see more than two
- Go beyond your current knowledge and skills

Possible code evaluation criteria

- Correctness guarantees, time and memory constraints
- Are input and output data validated for consistency?
- Is there a pipeline? is output suitable for tables or diagrams?
- Is the code readable, reusable and sufficiently modular?



About the data and experiments

- Is the data relevant and sufficient?
- Is the data "diverse" in relevant dimensions?
- What do you measure in each experiment? Quality, running time, error?
- Why is this data good for these experiments?
- Is the data possibly biased, and how may this affect the results?

Today

- Explain your project programming work to the other team
- Mention what you have done and not yet done
- Introduce the other team to your code
- Read, understand, evaluate, ask questions, ...
- Explain to the other team positive and less positive, yet constructive points about their work
- Together, derive useful "best practices" and add them to the collaborative document
- Reorganize the document where needed

Collaborative learning

Please be constructive!

- No deliverable via e-mail or Brightspace. Objectives for today:
- **1** 9:15 Do the code review
- 2 10:00 Contribute to the collaborative document with best practices at https://is.gd/snacs2024codereview
- 3 10:20 Jointly arrive at a set of best practices for the entire class
- 4 10:40 Complete the course questionnaire
- 5 Within the next 2 days: Complete 3-minute questionnaire about the code review session (link will be sent via email)
- For further instructions, see the course website

Good luck!

- Group 1 Anomaly detection (A) Group 2 - Anomaly detection (B)
- Group 3 Anomaly detection (C)
- Group 4 Anonymity in networks (A)
- Group 5 Anonymity in networks (B)
- Group 6 Anonymity in networks (C)
- Group 7 Centrality estimation (A)
- Group 8 Centrality estimation (B)
- Group 9 Centrality estimation (C)
- Group 13 Core/periphery structure (A)
- Group 14 Core/periphery structure (B)

Group 15 - Core/periphery structure (C) (size 3)

- Group 19 Graph evolution rules (A)
- Group 20 Graph evolution rules (B)
- Group 21 Graph evolution rules (C)
- Group 22 Influence spread and virality (A)
- Group 23 Influence spread and virality (B)
- Group 24 Influence spread and virality (C)
- Group 16 Graph compression (A)
- Group 17 Graph compression (B)
- Group 18 Graph compression (C)

- Group 12 Community detection (C) Group 10 - Community detection (A) Group 11 - Community detection (B) Group 30 - Network motifs (C) Group 28 - Network motifs (A) Group 29 - Network motifs (B) Group 39 - Shortest paths (C) Group 37 - Shortest paths (A) Group 38 - Shortest paths (B) Group 33 - Network embeddings (C) Group 31 - Network embeddings (A) Group 34 - Sampling from networks (A) Group 35 - Sampling from networks (B) Group 36 - Sampling from networks (C) Group 40 - Temporal network analysis (A) Group 41 - Temporal network analysis (B) Group 27 - Link prediction (C) Group 25 - Link prediction (A) Group 26 - Link prediction (B) Group 45 - Visualization algorithms (C) Group 43 - Visualization algorithms (A)
- Group 44 Visualization algorithms (B)