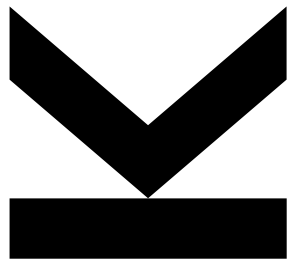


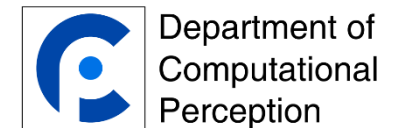
ONLINE MUSIC LISTENING CULTURE OF KIDS AND ADOLESCENTS



Listening Analysis and Music Recommendation Tailored to the Young

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TAKE AWAY...

age is substantially associated with music preferences

- particularly in terms of genre

approach

- listening events from Last.fm (LFM1b)
- focusing on users aged 6 to 18 years: (6,12), (13,14), (15,16), (17,18)

results on music recommendation performance

- improved performance for all fine-grained user groups up to 18 years
- decreased performance for adult users (19 years and older)

We conclude that tailoring a collaborative filtering system to users ≤ 18 years is beneficial.



BACKGROUND



Studies investigating the **relationship between age and music preferences** are **rare**.

- samples from population of university students
- mostly homogeneous with respect to age

The few studies show:

age is substantially associated with music preferences, particularly in terms of genre

TWO CONTRIBUTIONS

relationship between age and
music preferences (genres)

recommendations to age groups

MUSIC PREFERENCES OF THE YOUNG VS. ADULTS

- more preferred by the young
 - rock (20.17% vs. 19.49%)
 - alternative (19.03% vs. 17.85%)
 - pop (12.99% vs. 12.57%)
 - metal (5.96% vs. 5.25%)
 - rap (3.66% vs. 2.78%)
 - rnb (2.76% vs. 2.34%)
- more preferred by adults
 - electronic (11.67% vs. 11.07%)
 - folk (5.76% vs. 4.73%)
 - jazz (3.67% vs. 2.56%)
 - blues (2.89% vs. 2.23%)
- entire user population
 - overall agreement score of $\alpha = 0.493$,
 - moderate homogeneity in genre preferences
- age groups
 - young $\alpha = 0.539$
 - adults $\alpha = 0.546$

MUSIC PREFERENCES OF THE YOUNG IN DIFFERENT COUNTRIES

consistent across countries

- general preference for rock
- similar for alternative and pop

country-specific peculiarities

- liking of metal is particularly high in Poland (9.12%) and Finland (8.87%)
- highest gap in preference between countries: metal
 - Poland (9.12%) vs. USA (3.20%)
- highest homogeneity of music preferences:
 - United Kingdom ($\alpha = 0.623$) + Sweden ($\alpha = 0.612$)

Country-specific differences (examples)

- metal: Poland (9.12%) vs. USA (3.20%)
- pop: Sweden (15.90%) vs. Russia (10.96%)
- electronic: Russia (14.26%) vs. Brazil (8.31%)
- alternative: Poland (19.83%) vs. Finland (16.56%)
- rnb: United Kingdom (3.51%) vs. Russia (1.82%)
- rap: Germany (5.60%) vs. Brazil (2.16%)

MUSIC PREFERENCES OF AGE GROUPS

- young listeners' high preference for rock and low preference for blues holds also for the fine-grained user groups
- folk: liking rises with increasing age
 - from 4.41% to 4.81%

peak in liking

age group (13,14)

- rnb (4.24%)
- rap (4.47%)
- pop (13.49%)

age group (15,16)

- rock (20.44%)
- punk (9.01%)
- alternative (19.26%)
- metal (6.11%)

low point in liking

age group (15,16)

- electronic (10.60%)
- jazz (2.23%)

age group (13,14)

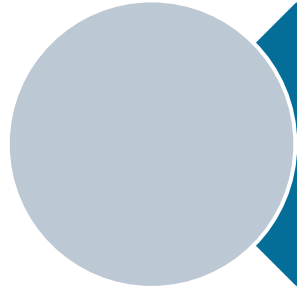
- blues (2.02)

RECOMMENDATION RESULTS

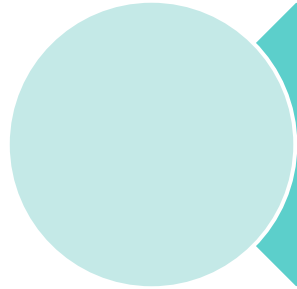
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- decreases performance for adult users (19 years and older)

groups	no. users	RMSE	MAE
All users	120157	29.105	25.202
All young users (0,18)	6101	7.766	2.940
All adult users (19,60)	39514	77.548	76.131
(6,12)	80	5.178	1.555
(13,14)	257	10.395	4.230
(15,16)	1435	9.513	3.815
(17,18)	4181	7.469	2.835

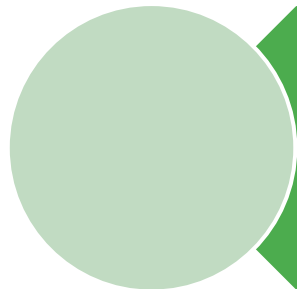
FUTURE AVENUES OF RESEARCH



considering highly varying “music listening culture” in different countries



integration of more data sources



deployment of additional research instruments (e.g., surveys)

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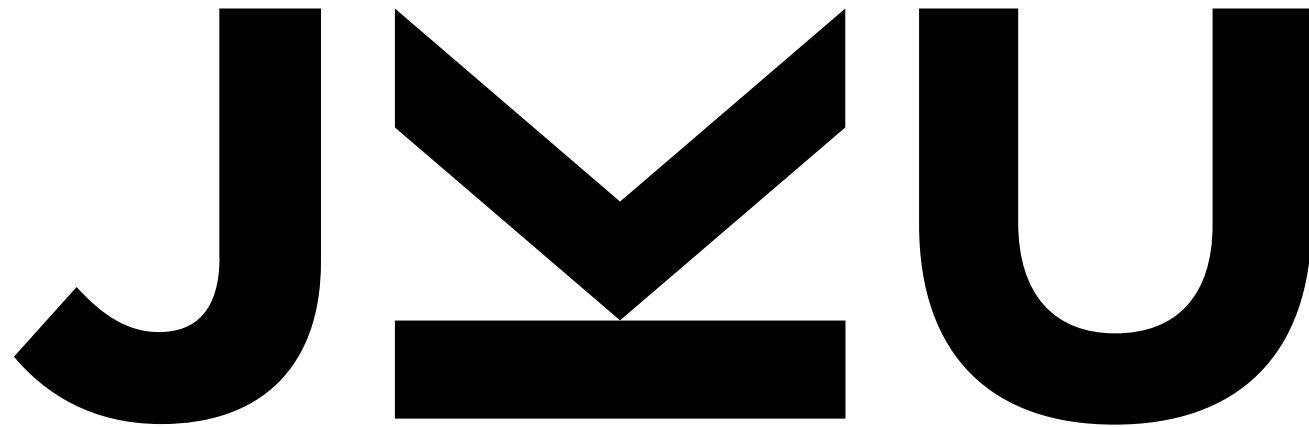
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