A Survey of App Store Analysis for Software Engineering

- Martin et al. (IEEE TSE survey)

Summary

A systematic survey that organizes the emergent research area “App Store Analysis” into subfields (API analysis, feature analysis, release engineering, review analysis, security, store ecosystem comparison, size/effort prediction). Tracks growth, data scales used, common methods and open problems.

Key insights

- App-store data uniquely combines technical, business and user-facing (reviews/ratings) attributes — enabling new socio-technical analyses.
- Rapid growth of research using large-scale datasets (10k–100k+ apps) and a move from conceptual to empirical studies.
- Important subfields identified: review analysis (mining feedback for requirements/bugs), feature-level analyses (features as unit of change), release engineering (update strategies), and security (malware/permission analysis).

Practical implications

- Researchers should exploit cross-cutting analyses (combine reviews, downloads, and code/permissions).
- Tool builders can extract actionable signals for developers (bug triage, feature prioritization, release timing).

Limitations / future directions

- Data access restrictions (stores limiting histories/top lists) hamper reproducibility; authors call for centralized, shareable corpora.
- Many studies are heterogeneous in definitions and metrics — need standardization (e.g., BMI, feature taxonomy).