

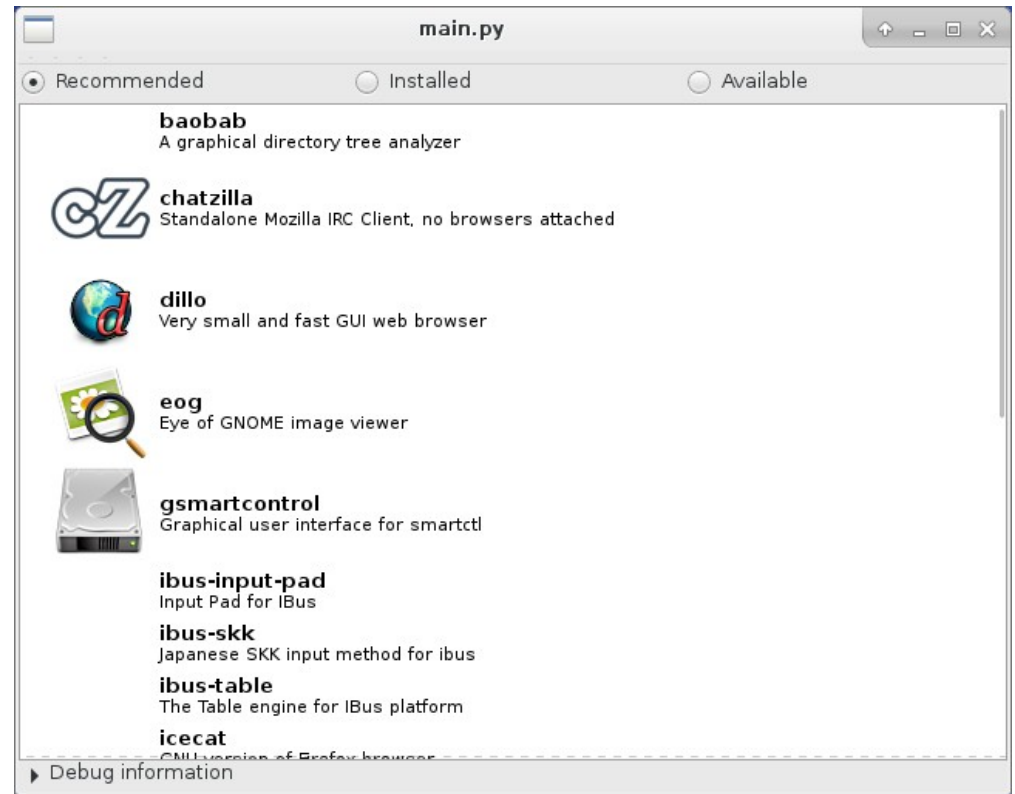
Fedora Applications Recommender

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PV254 – Recommender systems

About

- Desktop tool for application recommendations
- Recommendations based on currently installed applications
- Designed for Fedora Linux distribution



Data

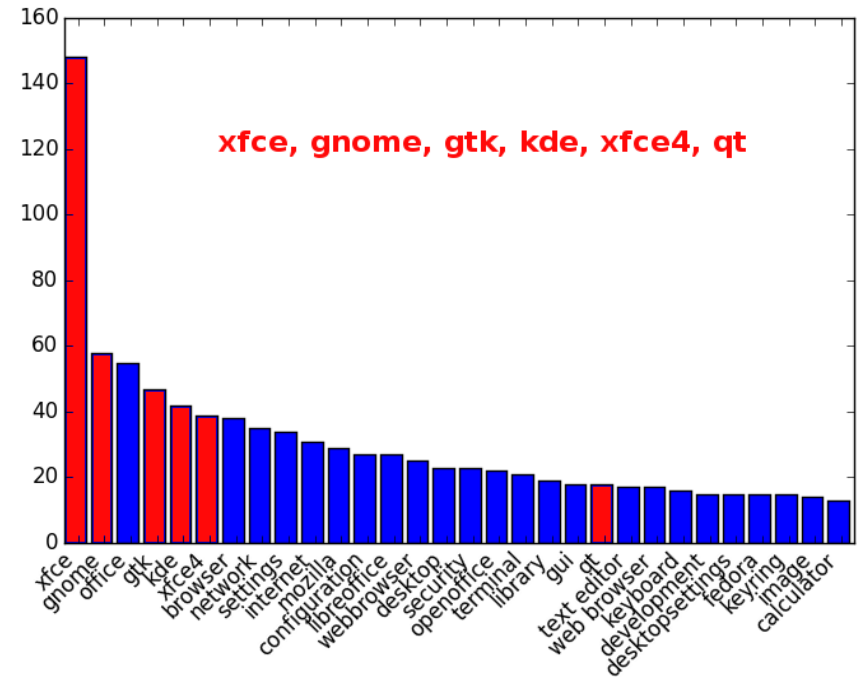
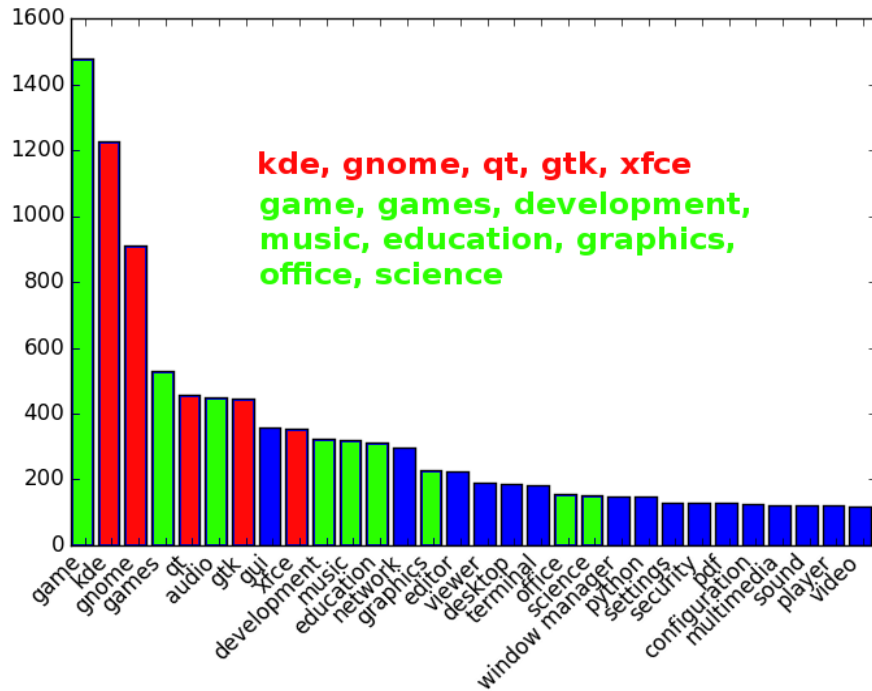
- List of available/installed packages
 - Live from running system (using dnf)
 - Includes package description
- Package “tags”
 - From Fedora Tagger online app
 - <https://apps.fedoraproject.org/tagger/>
- Categories
 - From Fedora Project Packages GIT repositories
 - <http://pkgs.fedoraproject.org/cgit/>

Recommendations

- Content-based filtering
- Recommendation
 - Based on installed (“favourite”) applications
 - Recommendations per package category
 - Cosine similarity of “installed” tags and tags for available applications
 - Term frequency using package description

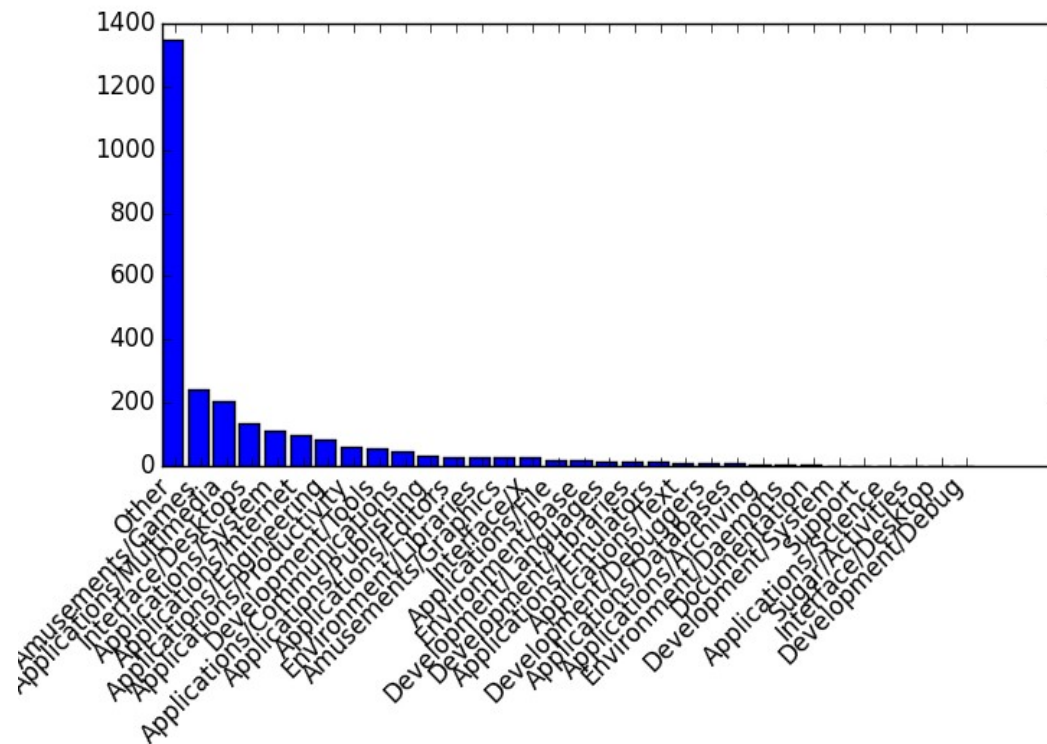
Problems

- Too generic tags
 - Packages mostly tagged based on it's framework or category



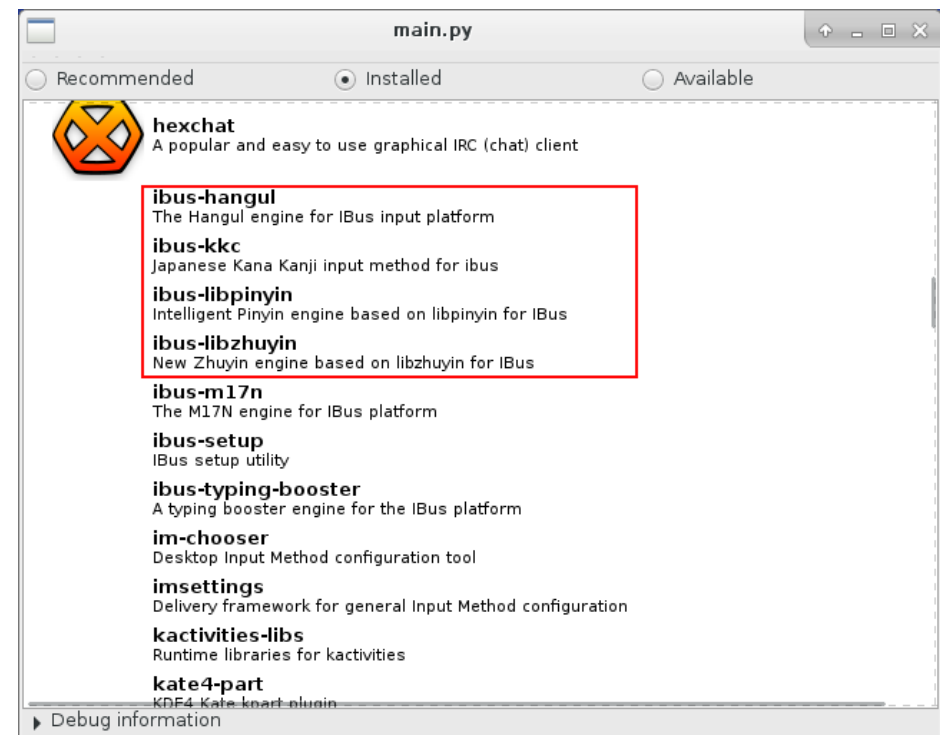
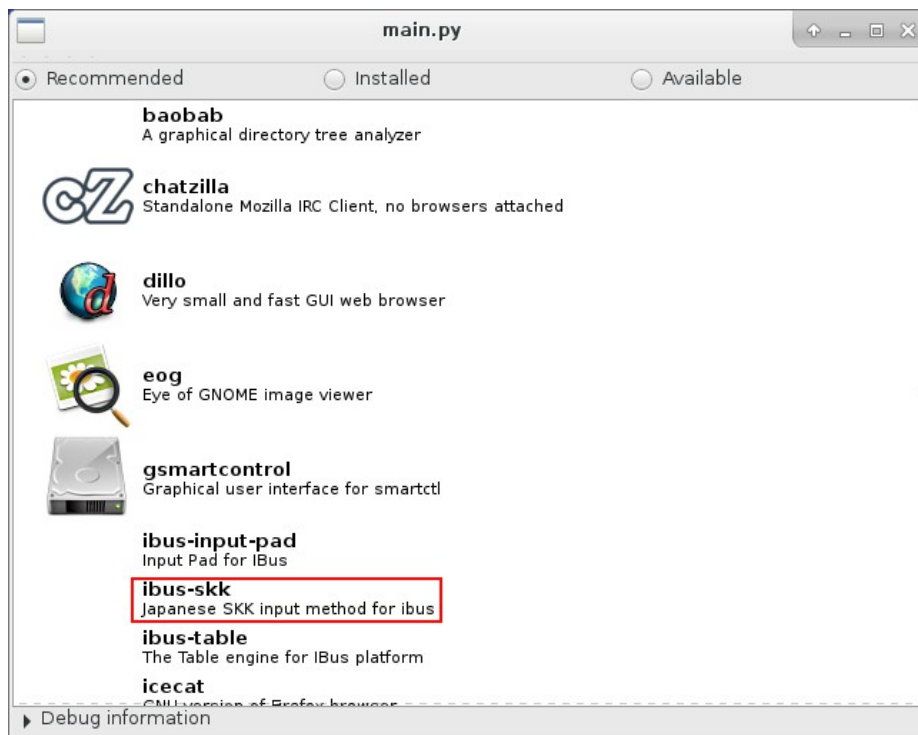
Problems 2

- Insufficient data
 - 32 categories, but more than 50 % “Other”
 - Sometimes very short descriptions



Problems 3

- Installed vs. “Favourite” applications
 - Automatically installed applications you never use
 - Recommended: ibus-skk (“A *Japanese Simple Kana Kanji Input Method Engine for ibus.*”)
 - Installed: ibus-hangul, ibus-kkc, ibus-libpinyin, ibus-libzhuyin



Testing

- Complicated
 - No online app – necessary to download and install/run a desktop application
 - Available only for Fedora (DNF, package names)
- Testing
 - Using VMs with different installations
 - Using colleagues at Red Hat

Questions

- Thank you for your attention.
- Source
 - <https://github.com/vojtechtrefny/recsys>
 - For testing use prepared tarball with code + pre-downloaded application data