Steam videogames platform

Exploratory Data Analysis

Context

- Conduct a study of the videogames market

- Data from Steam videogames platform’s catalogue

  Release date, number of owners, genre, langages, ...

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Tasks

- Load the dataset in a Spark context
- Preprocess the dataset into tables relevant for data analysis
- Carry out the exploratory data analysis using PySpark API
- It is proposed to use cloud services such as Databricks to conduct the EDA and make visualizations

Data processing

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  - Direct download from AWS S3
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- DataFrame API
  Process with object methods
- SQL API
  Process with SQL queries
- Pandas API
  Convert to `pandas.DataFrame`

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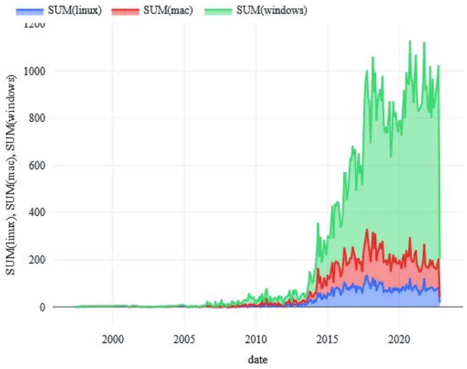
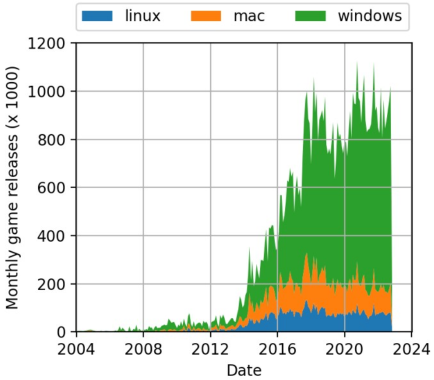
Data visualization

- Export to Python structures (`pandas.DataFrame`, `np.ndarray`, `list`) and build visualization (matplotlib, plotly, ...)
- Use vizualization tools from cloud services (eg Databricks)

Databricks plotly figure



Matplotlib figure



Comparison of the technologies used

pandas

- ✔ Python-like interface
- ✔ Very flexible
  full Python expressivity
- ✘ Non-distributed compute
  Inefficient for large datasets
- ✘ Requires Python

PySpark

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- ✘ Slow computation setup
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  Java/Scala/Python/R

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Data processing strategy

- Large-scale operations with PySpark
- Small-scale processing with Python

Key takeaways on the videogames market

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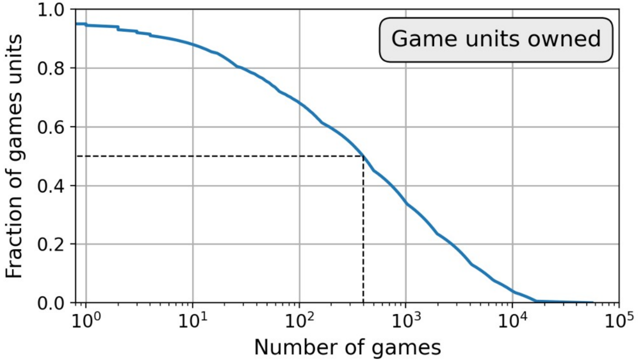
  - Half units distrubuted from 400 games



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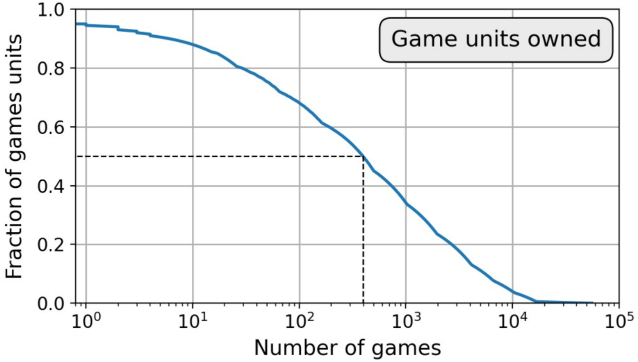
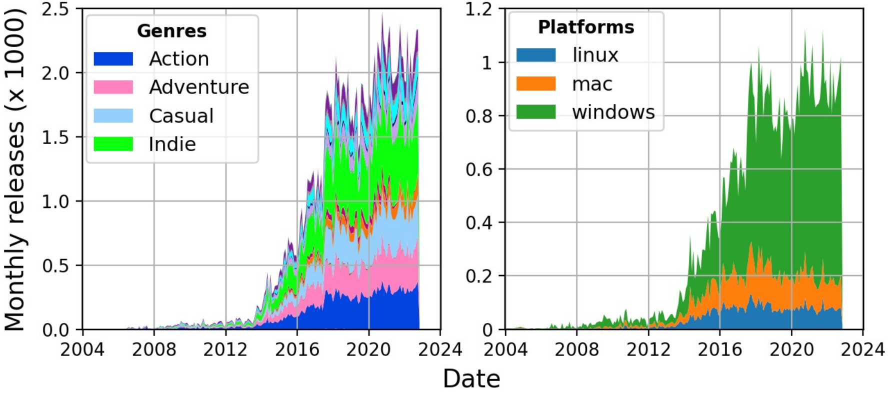
  - Major game genres : action, adventure, causal and indie





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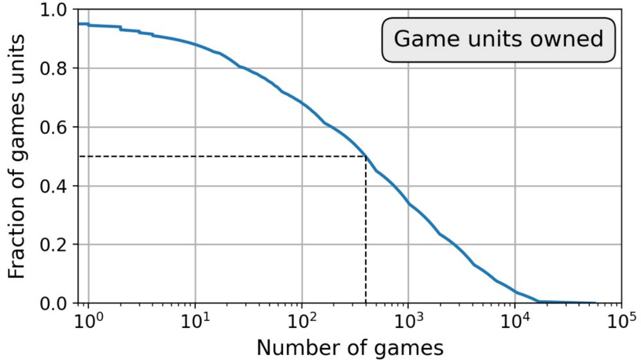
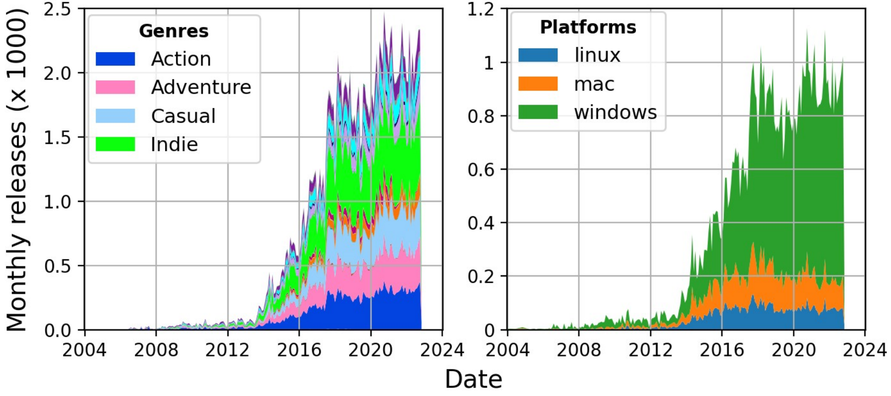
- Microtransactions are an important source of revenue
  - Major free games : Dota 2, ...





Thanks!