Turning your Data/AI algorithms into Full Web Applications in no time with Taipy

December, 2023

Presented by Avaiga

© **Taipy 2023** All rights reserved

The Problem

Low success rate of Python Data/AI projects while companies spend vast amounts of money on them.

(Gartner 2019)

© **Taipy 2023** All rights reserved

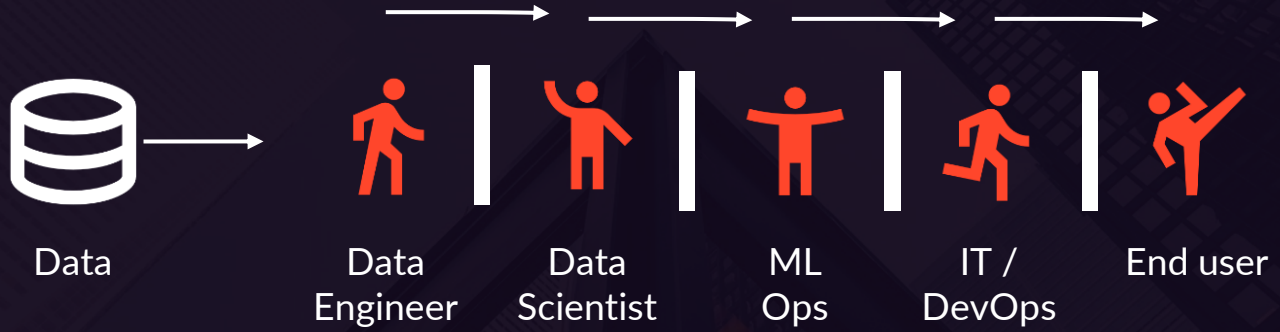
The Causes

- Difficulty to recruit Talents,
- Current siloed approach is not working,
- Lack of a common software platform,
- Gap between IT teams and End-Users ...

(IDC 2020)

© **Taipy 2023** All rights reserved

From pilot to project,
Over 85% failure!



© **Taipy 2023** All rights reserved

Almost 90% of data applications take too long, are too costly to develop and deploy.

***Source**: IDC 2020 FutureScape: Worldwide Data and Analytics 2021 Predictions*

© **Taipy 2023** All rights reserved

The Solution

© **Taipy 2023** All rights reserved

What is Taipy?

© **Taipy 2023** All rights reserved

Taipy covers both Frontend + Backend

- 100% Python webapp development
- Open-Source & Enterprise license
- Easy to learn

© **Taipy 2023** All rights reserved

Taipy

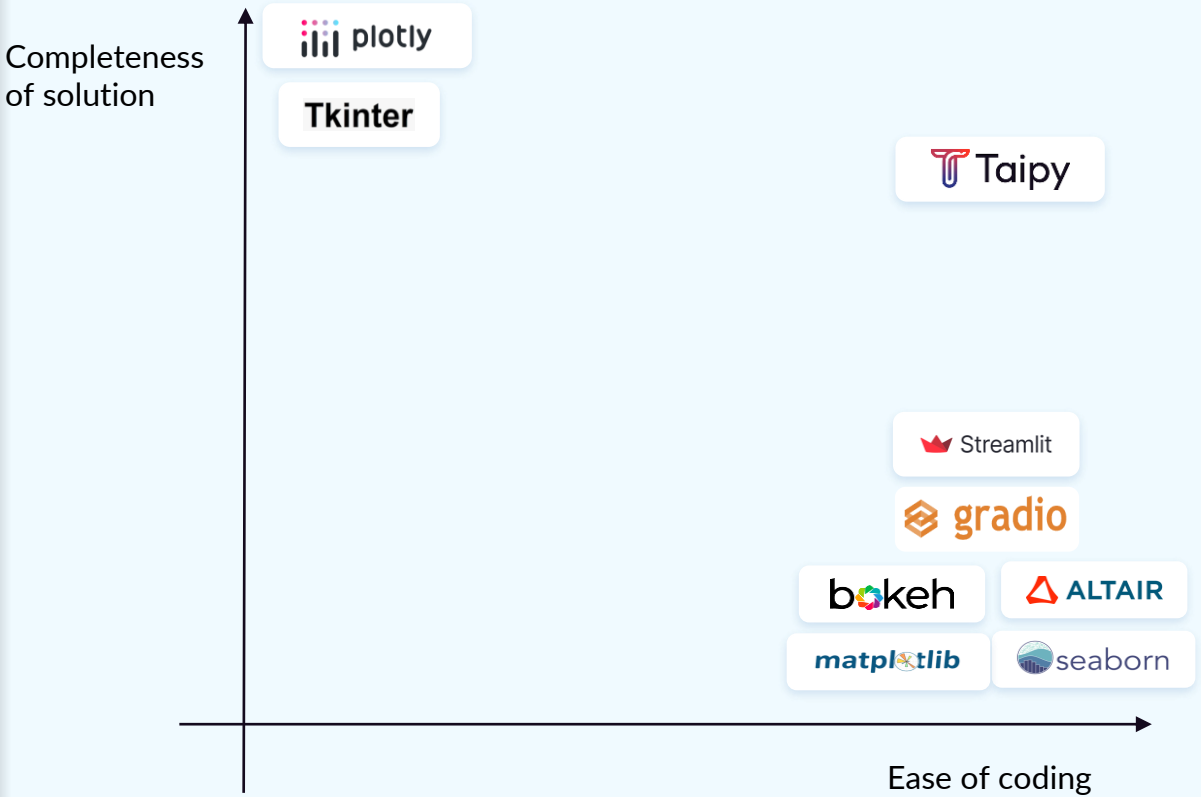
Covers:

- DashBoards, Data Apps,
- AI (ML, DL, RL),
- Simulation,
- Operations Research,
- Ad-hoc Algos,
- and more.

© **Taipy 2023** All rights reserved

Taipy frontend

Python Graphical Packages



© Taipy 2023 All rights reserved

Taipy frontend

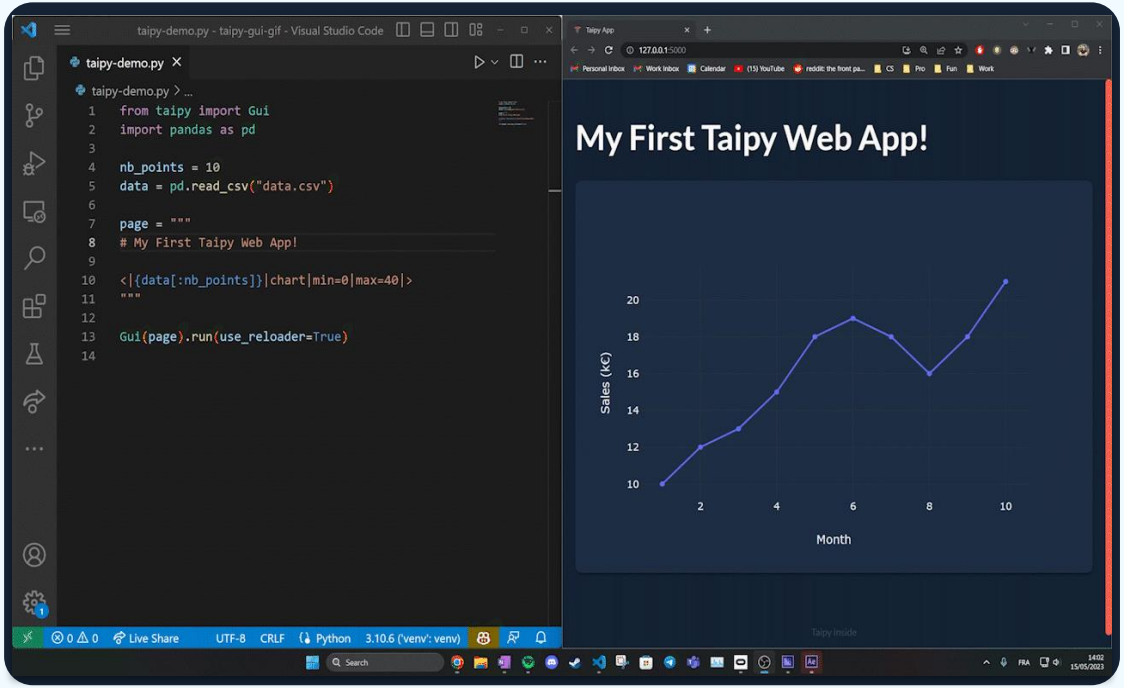
Python Graphical Packages

	Taipy	Other GUI Packages
Efficient Event loop	✓	✗
Sync / Async Calls	✓	✗
Easy Customization	✓	✗
Notebook Compat.	✓	✗
Markdown	✓	✗
Large Data Support	✓	✗
Multi-Users	✓	✗
Performance	✓	✗

© Taipy 2023 All rights reserved

Taipy frontend

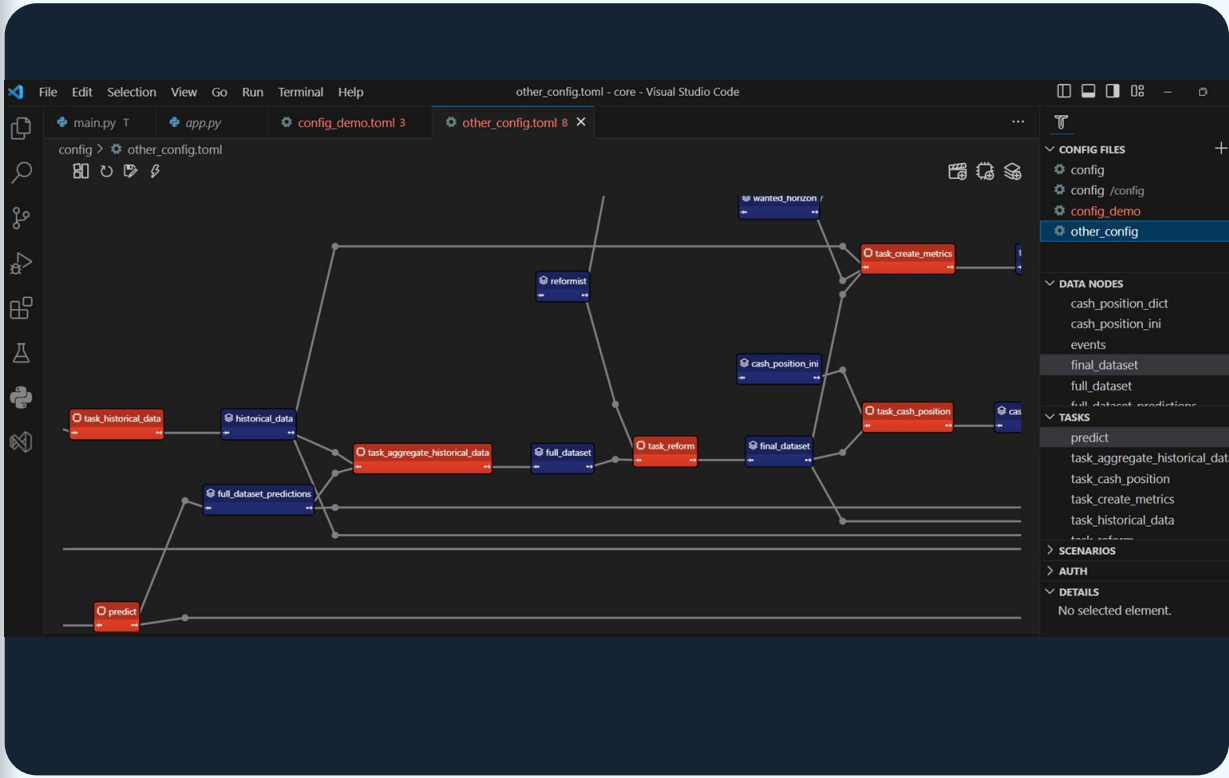
Python GUI Builder



© **Taipy 2023** All rights reserved

Taipy backend

Powerful Pipelines with Scenario Management



© **Taipy 2023** All rights reserved

Taipy backend

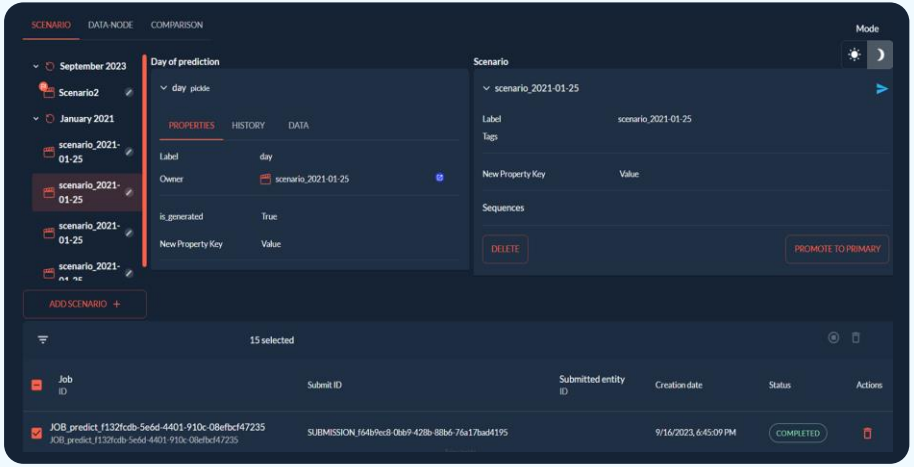
Execution Pipelines with Scenario Management

	Taipy	Other Pipeline Management Packages
Pipeline Execution	✓	do_ ✓
Scenario Mgt	✓	⊗
Caching	✓	⊗
Data Scoping	✓	⊗
Versioning	✓	⊗
Cycles	✓	⊗
Time to master	Short	Long

© Taipy 2023 All rights reserved

Frontend and backend integration

- Pipeline Execution
- Monitoring
- Graphical Explorers for your Data Nodes
- Graphical Explorers for your executions (Scenarios)
- Registering and Visualising your past Executions (ie Scenarios)



© **Taipy 2023** All rights reserved

The Results

© **Taipy 2023** All rights reserved

Successful projects at reduced costs

4 x

Reduce development/ deployment time.

Benefits

- Much faster industrialization of projects.
- Save development & deployment time
- Reduce maintenance costs.
- Facilitate collaboration.
- Better performance
- Much higher ROIs

10 x

Savings of resources and costs

Benefits

- 90% of development work performed by Python developers.
- Little to zero need for resources from other departments.
- Much lighter in terms of project management.

© **Taipy 2023** All rights reserved

Reduce Overall Cost by a factor 10 !

Project Example: Intermarché's Cash Flow Management	Budget	Number of IT personnel	Project Duration
Initial Option	600K	4	8 Months
Intermarché's IT Div using Taipy	60K	1.5	2 Months

© **Taipy 2023** All rights reserved

“ Taipy has become a core product for our AI strategy. Taipy allows to develop, deploy and maintain our AI applications with ease. It is an integral part of our corporate IT platform.”

Arnaud de Ligniville, CFO Intermarché

Taipy brings all the functionalities needed for an AI driven supply chain: Scenario Management, great UX, Predictive and Prescriptive AI, etc. And all at a fraction of the costs of alternative solutions.

Dang Huynh Uc My, Chairman TTC Sugar

Taipy enables us to implement the best practices to succeed with the industrialization of AI apps. It saves us several years of hard learning, many resources and has decreased the deployment of our apps drastically.

Jesselynn M., Responsible for McDonald’s HR applications

© **Taipy 2023** All rights reserved

© **Taipy 2023** All rights reserved

Taipy Enterprise

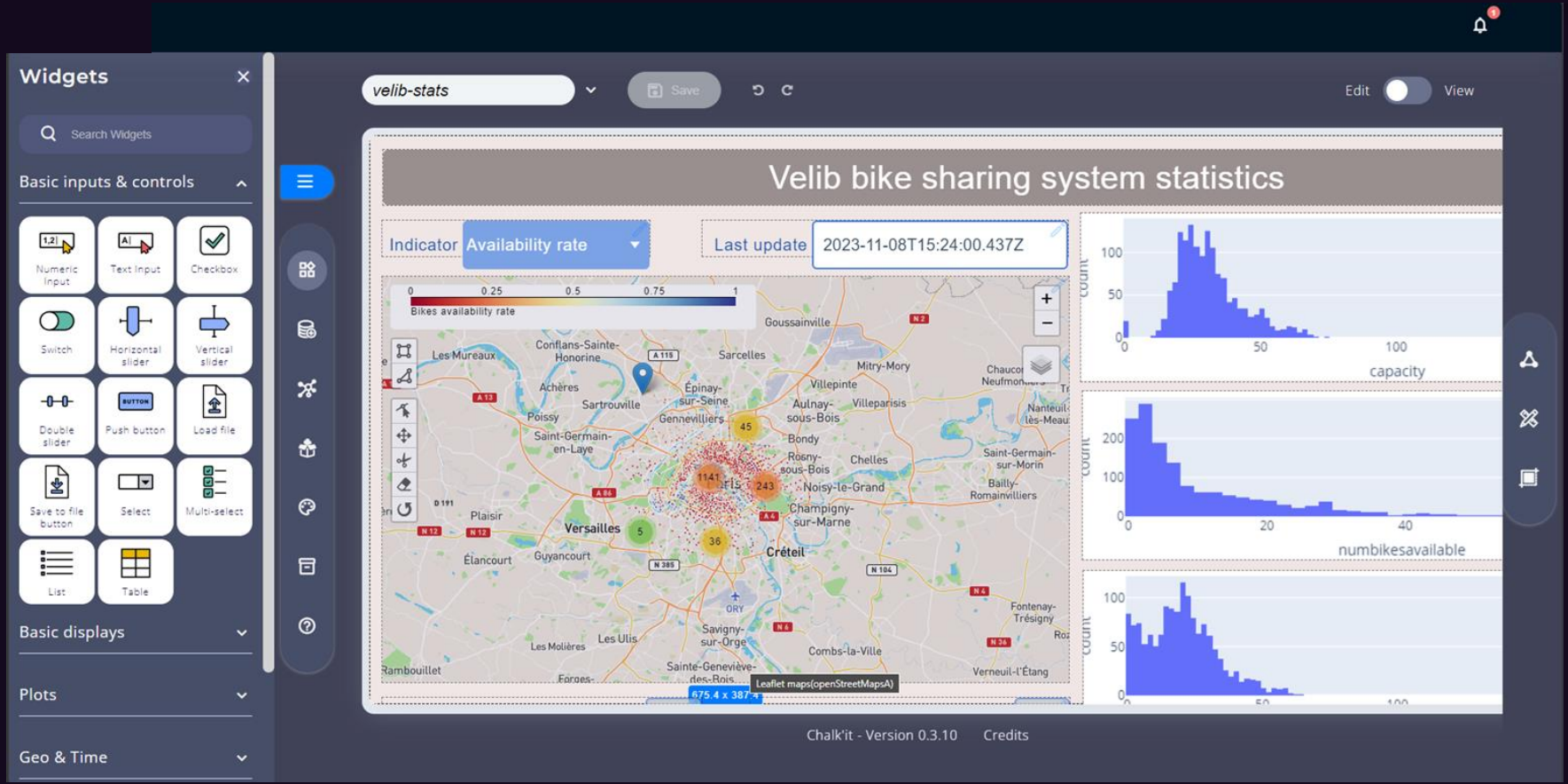
Overview

© **Taipy 2023** All rights reserved

Taipy Enterprise

© Taipy 2023 All rights reserved

GUI Designer - Example



Taipy integrates with Data Analytics Platforms

© **Taipy 2023** All rights reserved

Examples

Dataiku, Databricks, etc.

Taipy Application connects Databricks Data Sources

Taipy Application calls Databricks Jobs

Run Taipy within Databricks Notebooks

Taipy embedded in Dataiku

Taipy application calls Dataiku pipelines

© **Taipy 2023** All rights reserved

Thank you

And contribute to our Git repo !

https://github.com/Avaiga/taipy

© **Taipy 2023** All rights reserved

Additional Slides

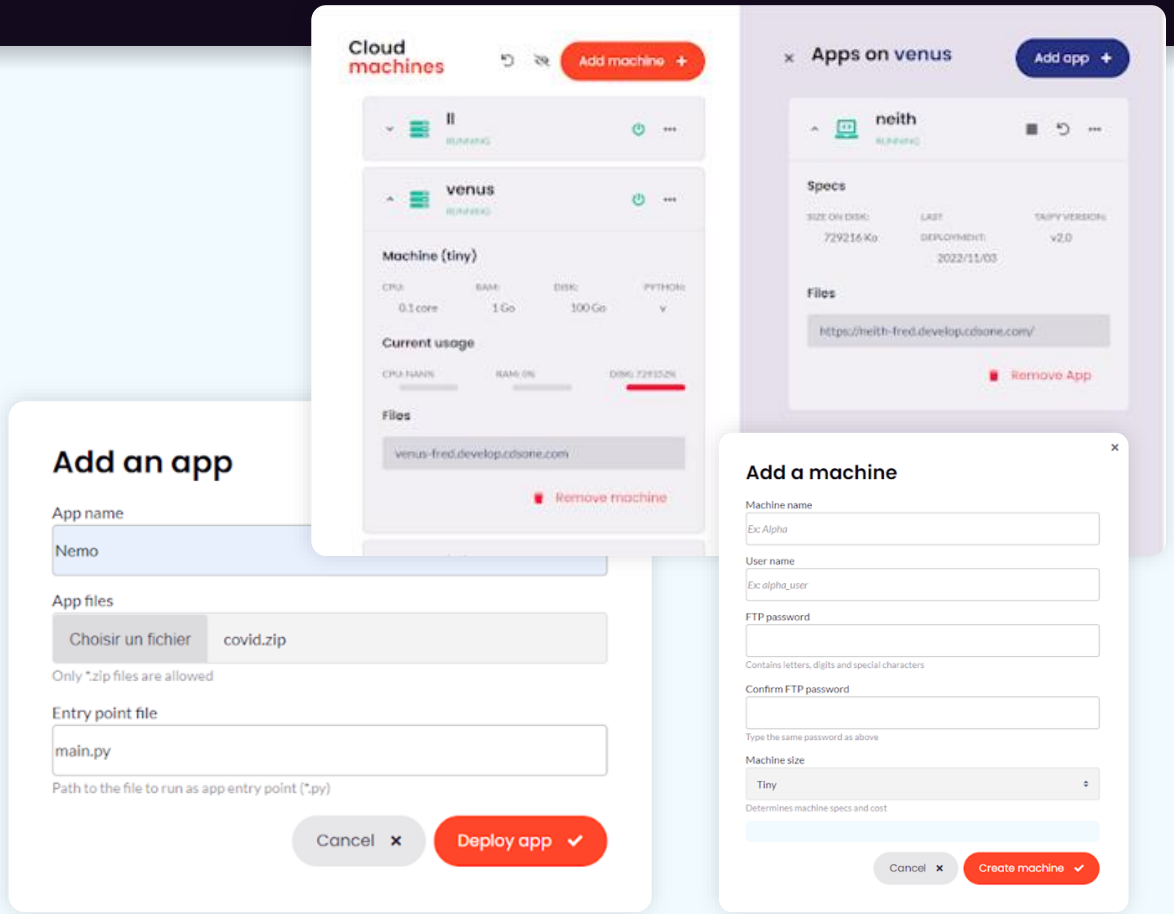
© **Taipy 2023** All rights reserved

Taipy's own Cloud,
Taipy Cloud

© **Taipy 2023** All rights reserved

Taipy Cloud

- **Deploy your Taipy Application with Point & Click**
- **Anyone can deploy on Taipy Cloud!**



© **Taipy 2023** All rights reserved

Only 20% of analytic insights delivered business insights through 2022.

While companies spent 271B$ on Data Analytics

***Sources**: Gartner 2019, Our Top Data and Analytics Predicts for 2019*
Fortune Business Insights 2022, Big Data Analytics Market Size

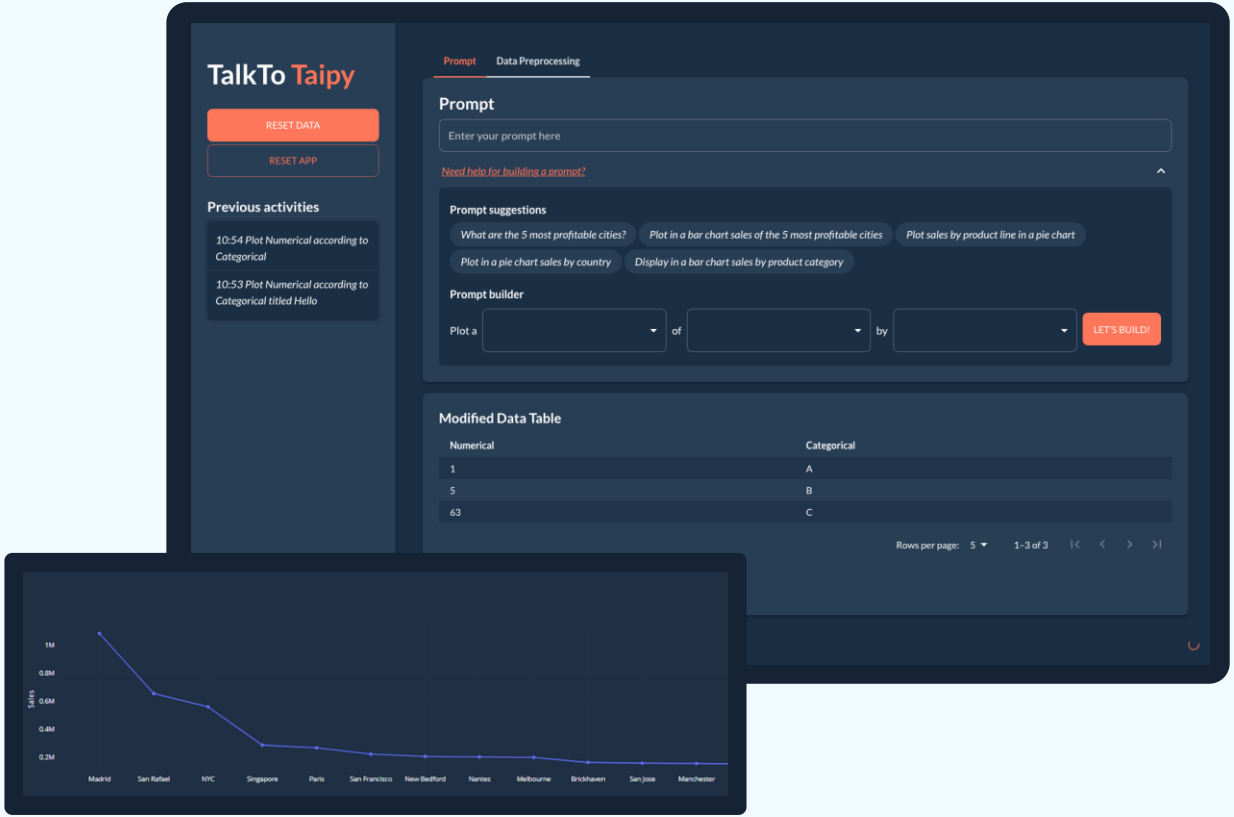
© **Taipy 2023** All rights reserved

Taipy is launching its own LLM, TalkToTaipy

© **Taipy 2023** All rights reserved

TalkToTaipy

- Taipy Application
- Generates Taipy code
- Load your own excel/csv table(s)
- Ask any question
- Generates Taipy graphical charts



© **Taipy 2023** All rights reserved