

An Open-Source Toolkit

nga IB-Tech

User Friendly Tools

Linux

Free operating system

Fit for purpose (general, techy, simple)

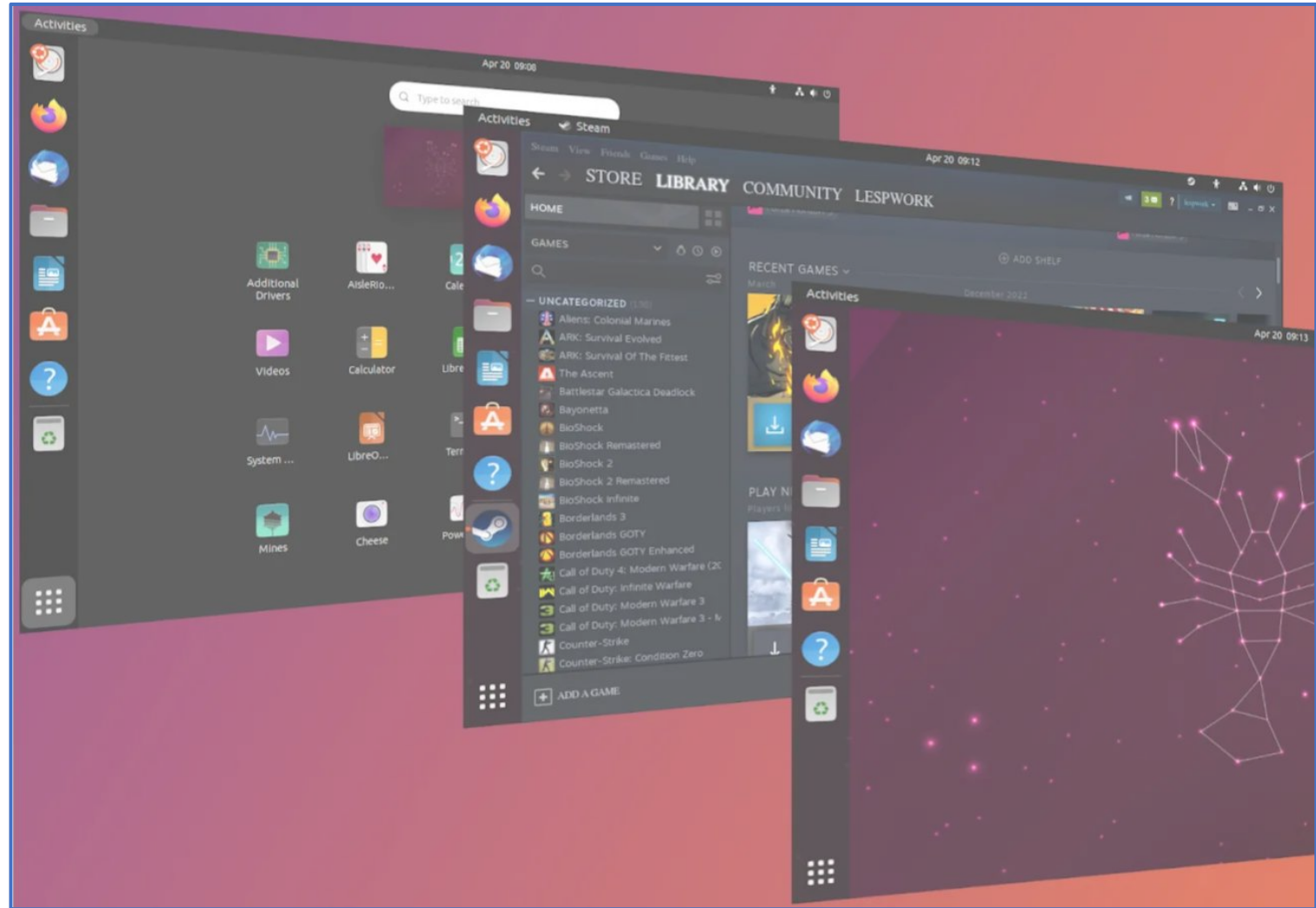
Good versions for tech newbies

Extensive documentation and community

Powers worldwide infrastructure

Continuous maintenance and free tools

Suggestion: If new in tech world, install dual-boot.



Nextcloud

Like big-tech, but better

Files, emails, documents, calendar

Privacy and security, GDPR compliant

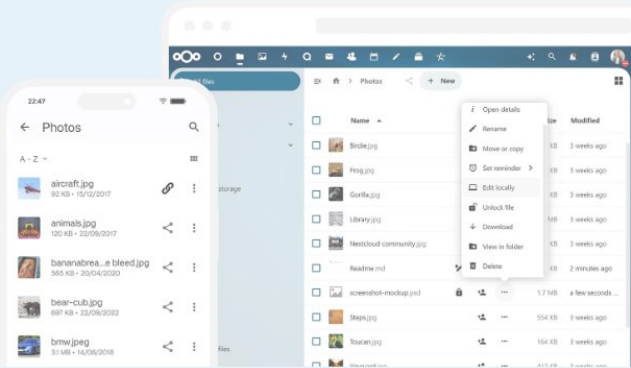
Extensible with apps and plugins

Great for small or medium companies

Mobile app present

Suggestion: Test it for your next company

Nextcloud Hub integrates the four key Nextcloud products Files, Talk, Groupware and Office into a single platform, optimizing the flow of collaboration.



Nextcloud Hub

- Nextcloud Files**
Nextcloud Files offers a self-hosted file storage and sync platform with powerful collaboration capabilities with desktop, mobile and web interfaces
[Learn more >](#)
- Nextcloud Talk**
- Nextcloud Groupware**
- Nextcloud Office**

- ✓ Easy access anywhere
- ✓ Infrastructure integration
- ✓ Powerful access control
- ✓ Designed for humans

[Play Hub video now](#)

LibreOffice

Free office suite

Word, spreadsheets, presentations, ...

Open to community contributions

Enhanced accessibility

Albanian language supported

Document encryption allowed

Suggestion: Try it with your parents



Home Assistant

Smart home automation platform

Supports control of home smart devices

Automate routines - centralized interface

Supports a wide range of devices and integ.

Can be self-hosted

Accessed via the mobile app

Suggestion: Home automation powerhouse that supports all major protocols



Android

Most popular mobile OS

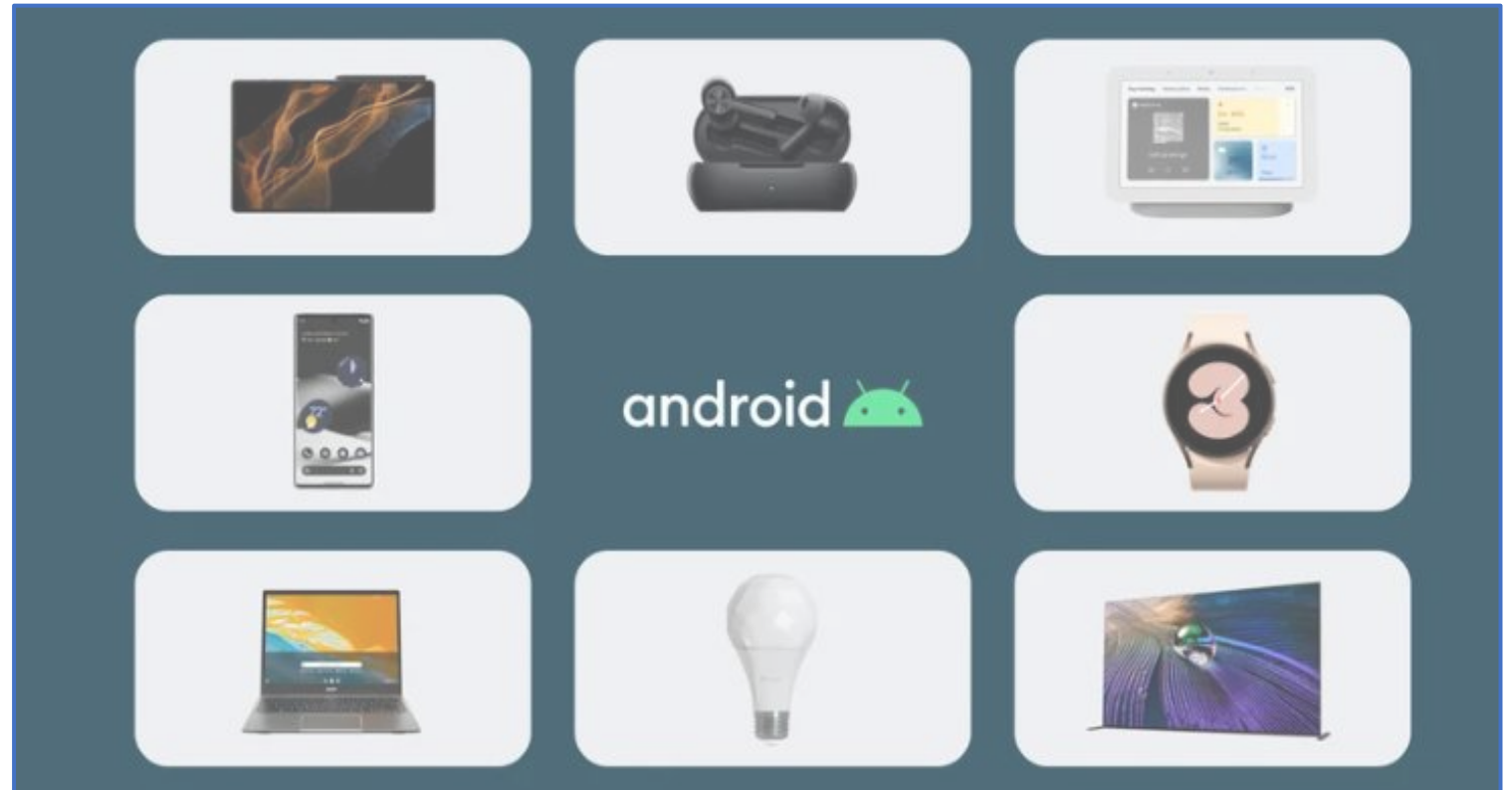
For smartphones, tablets, watches, ...

Diverse apps can be developed

Customizable with widgets

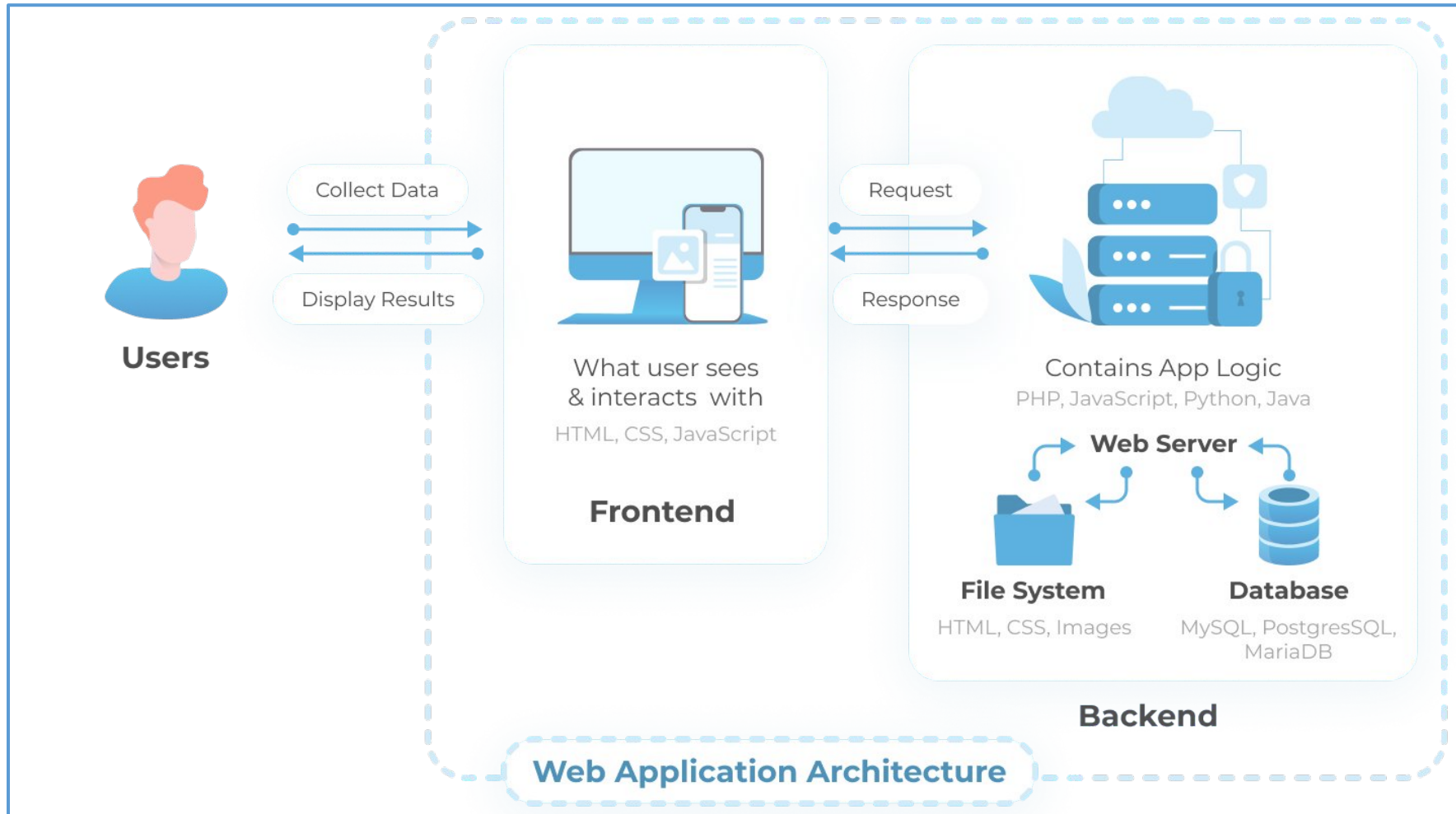
Regular security updates

Robust community and security



For Web Development

Web Application Basic Architecture



Bootstrap

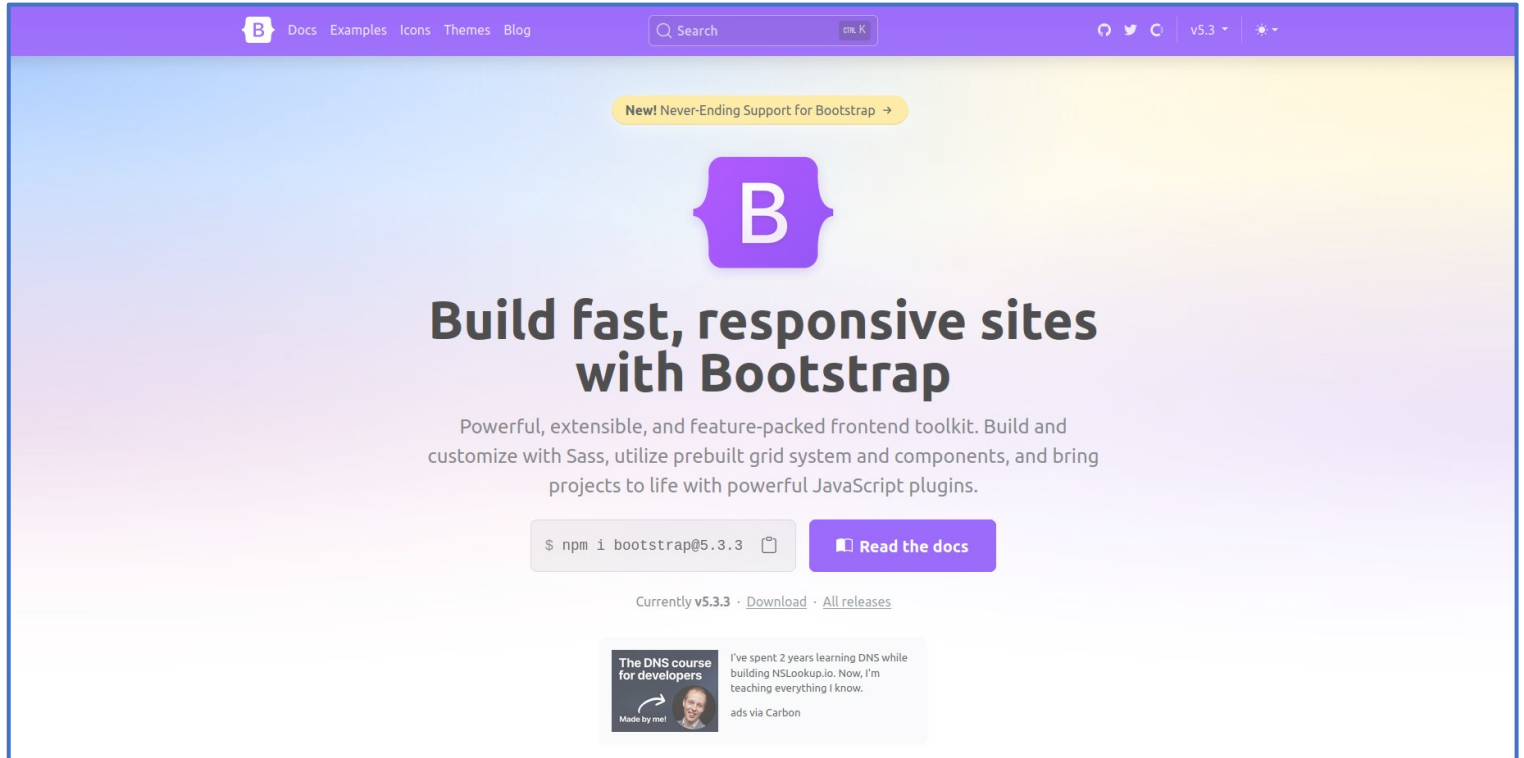
Framework for easy web development
Contains HTML, CSS and JS templates

Mobile-friendly

Visually appealing websites

Good start for scripting
Extensive resources online

Suggestion: Good for getting first stuff right.



WordPress

Content-management system

Builds websites and blogs

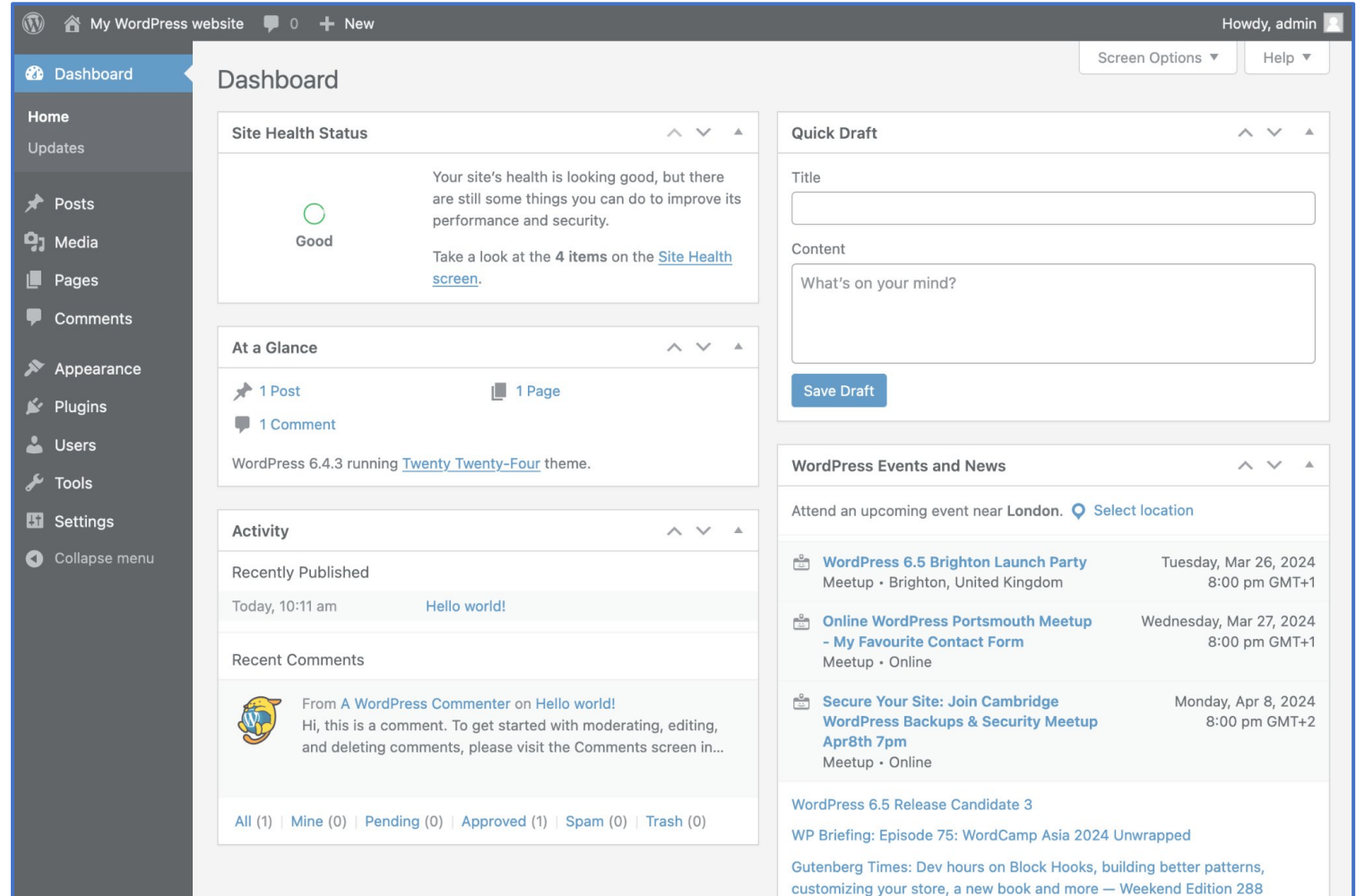
Vast support of plugins and themes

Supports a significant portion of web

Active community of developers

Continual improvement ecosystem

Suggestion: For non-super-technical professionals.



Python WebDev

Frameworks, powerful for building apps
Can be extended based on requirements

For small apps, Flask is easy to start
For API building, FastAPI is standard

For full capacity apps, Django best
Switching from other languages easy

Suggestion: Good language to transit to.



PostgreSQL

Powerful relational database

Reliable, robust, and extensible

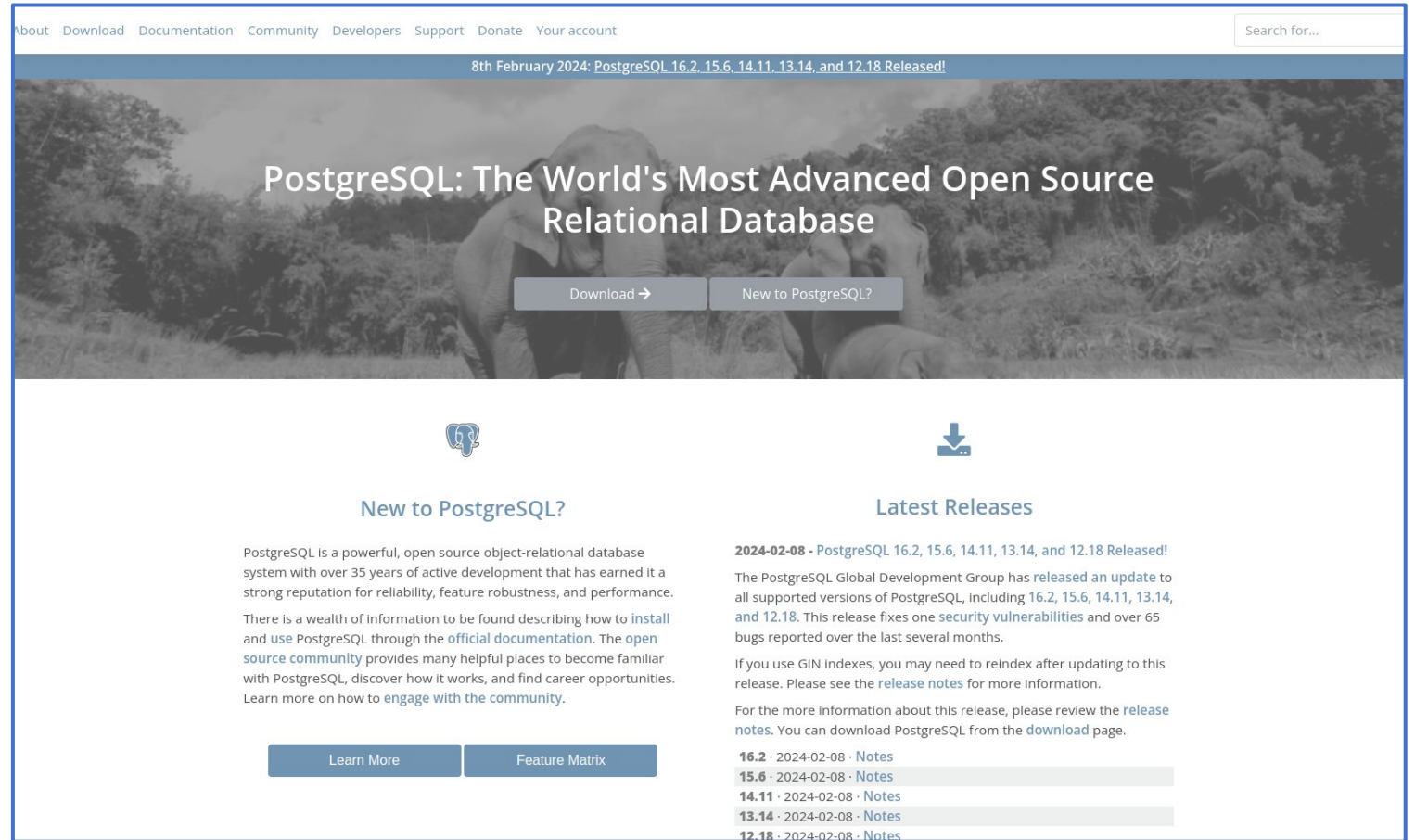
SQL queries, transactions, data types

Support for JSON and geo data

Used in different industries

Extensive documentation

Suggestion: *Powerful and good DB for your app.*



The screenshot shows the PostgreSQL website homepage. At the top, there is a navigation bar with links: About, Download, Documentation, Community, Developers, Support, Donate, and Your account. A search bar is located on the right. Below the navigation bar, a blue banner features the text "8th February 2024: PostgreSQL 16.2, 15.6, 14.11, 13.14, and 12.18 Released!". The main heading reads "PostgreSQL: The World's Most Advanced Open Source Relational Database". Below this, there are two buttons: "Download →" and "New to PostgreSQL?". The page is divided into two columns. The left column, titled "New to PostgreSQL?", contains text about PostgreSQL's history and a link to the "open source community". The right column, titled "Latest Releases", contains a section for the "2024-02-08" release, detailing the update to versions 16.2, 15.6, 14.11, 13.14, and 12.18, and listing links to release notes for each version. At the bottom of the left column, there are two buttons: "Learn More" and "Feature Matrix".

About Download Documentation Community Developers Support Donate Your account

Search for...

8th February 2024: PostgreSQL 16.2, 15.6, 14.11, 13.14, and 12.18 Released!

PostgreSQL: The World's Most Advanced Open Source Relational Database

Download → New to PostgreSQL?

New to PostgreSQL?

PostgreSQL is a powerful, open source object-relational database system with over 35 years of active development that has earned it a strong reputation for reliability, feature robustness, and performance.

There is a wealth of information to be found describing how to [install](#) and use PostgreSQL through the [official documentation](#). The [open source community](#) provides many helpful places to become familiar with PostgreSQL, discover how it works, and find career opportunities. Learn more on how to [engage with the community](#).

Learn More Feature Matrix

Latest Releases

2024-02-08 - PostgreSQL 16.2, 15.6, 14.11, 13.14, and 12.18 Released!

The PostgreSQL Global Development Group has released an update to all supported versions of PostgreSQL, including 16.2, 15.6, 14.11, 13.14, and 12.18. This release fixes one [security vulnerabilities](#) and over 65 bugs reported over the last several months.

If you use GIN indexes, you may need to [reindex](#) after updating to this release. Please see the [release notes](#) for more information.

For the more information about this release, please review the [release notes](#). You can download PostgreSQL from the [download page](#).

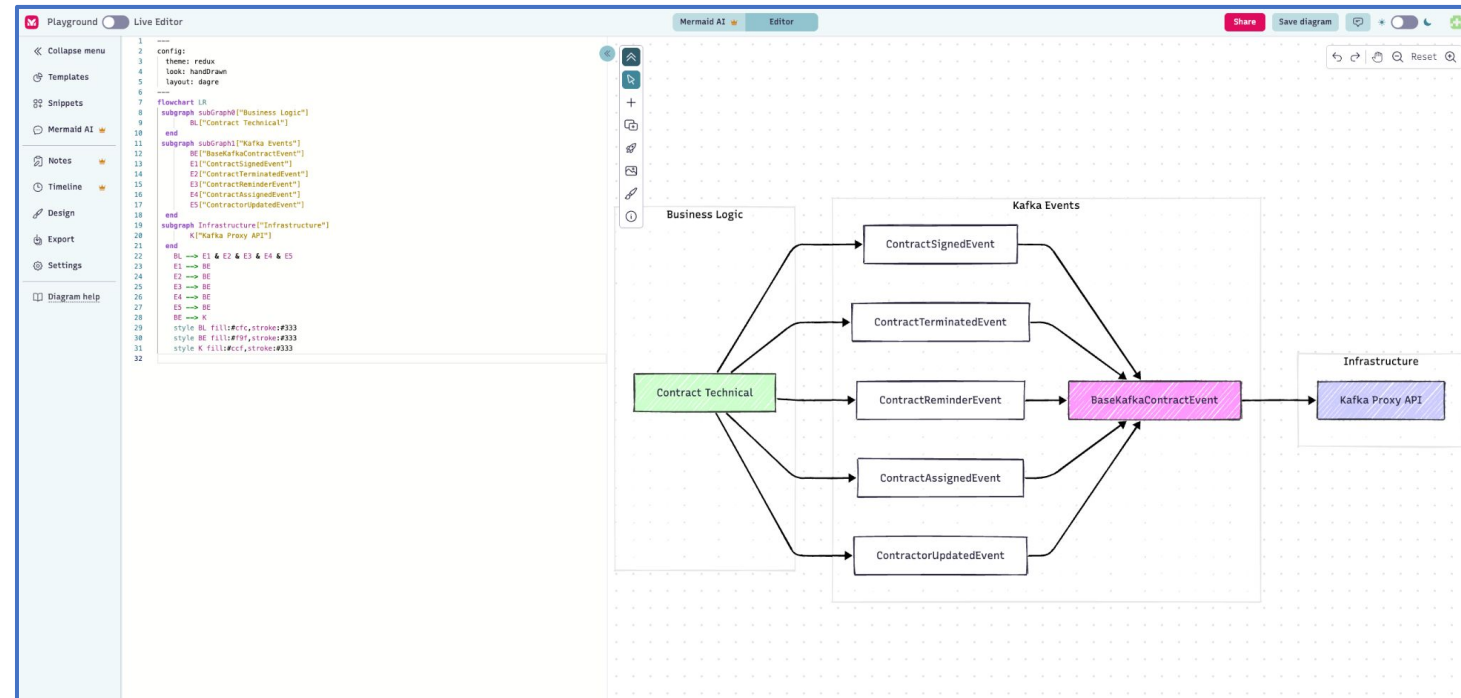
16.2 · 2024-02-08 · [Notes](#)
15.6 · 2024-02-08 · [Notes](#)
14.11 · 2024-02-08 · [Notes](#)
13.14 · 2024-02-08 · [Notes](#)
12.18 · 2024-02-08 · [Notes](#)

Mermaid / Diagramming and charting tool

Powerful tool for high-level architecture

- Generate flexible diagrams through code. Only worry about the nodes and their connections, Mermaid makes sure to generate a clean looking diagram where no arrows cross each other.
- Choose from multiple types of diagrams, such as:
 - Flowchart
 - Sequence diagram
 - Gantt diagram
 - Class diagram
 - Git graph
 - Entity Relationship Diagram
 - User Journey Diagram

Suggestion: Ideal for high-level architectures and documentation.



The diagram you see here was used to showcase a refactoring for handling Kafka events using SOLID principles and the Template pattern. Read the following blog for more information:

<https://www.blenddehari.com/blogDetail?blogId=7omljbWRW9iLG8PFrpfaG>

For IT & Devops

Docker

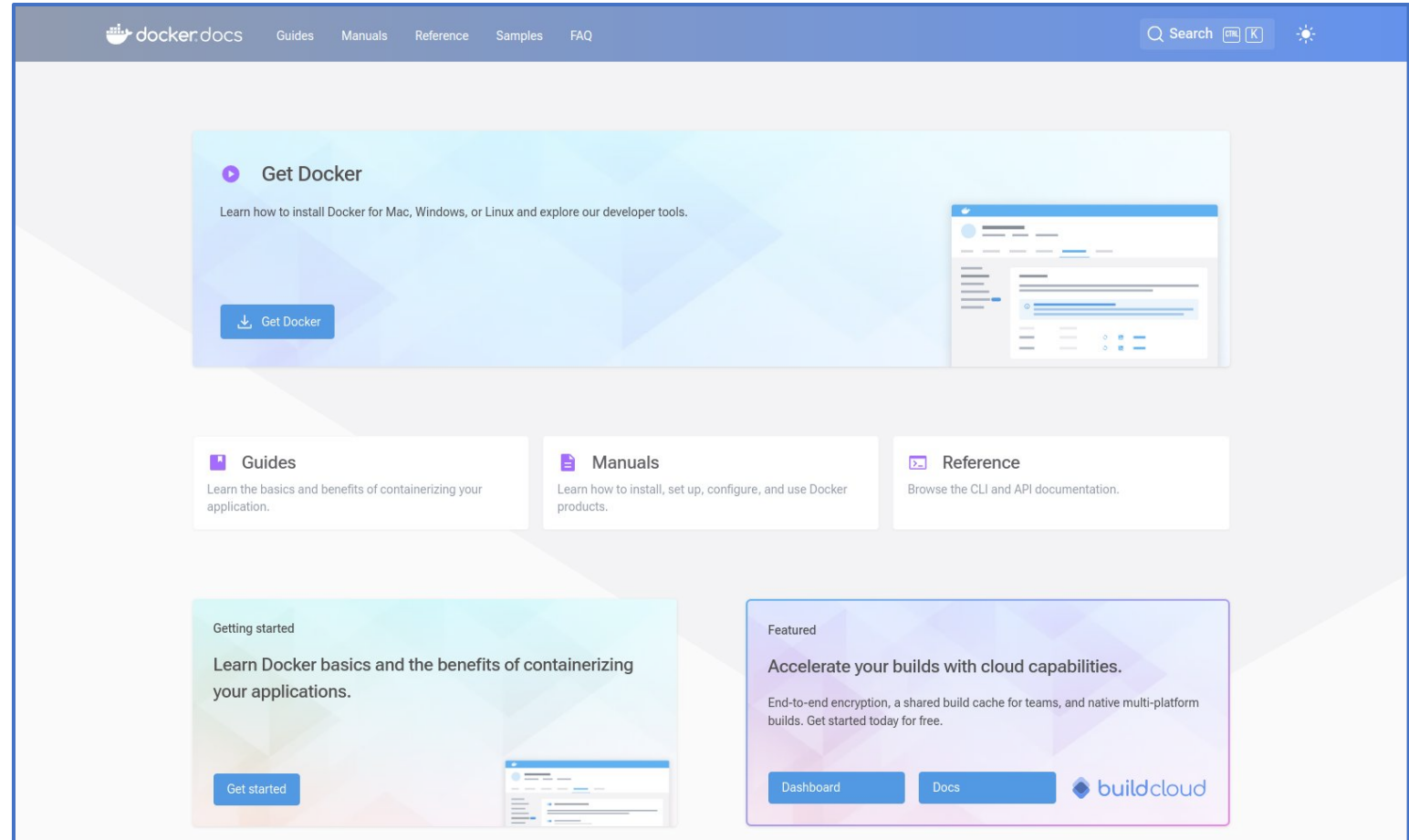
Package/containerize everything nicely
Lightweight portable technology

Standard technology for building apps
Helps reduce conflicts and reproduce

Useful for developing, shipping, running

It has an ecosystem of tools for support

Suggestion: Helpful for not-simple applications.



Git

Distributed version control system
Tracks changes in any set of computer files

Used for coordinating work between
programmers

Second biggest open source project after
Linux kernel



Suggestion: *Use it in your development environment*

Gitlab CI/CD

Web-based devops tools

Software dev - version control to ci/cd

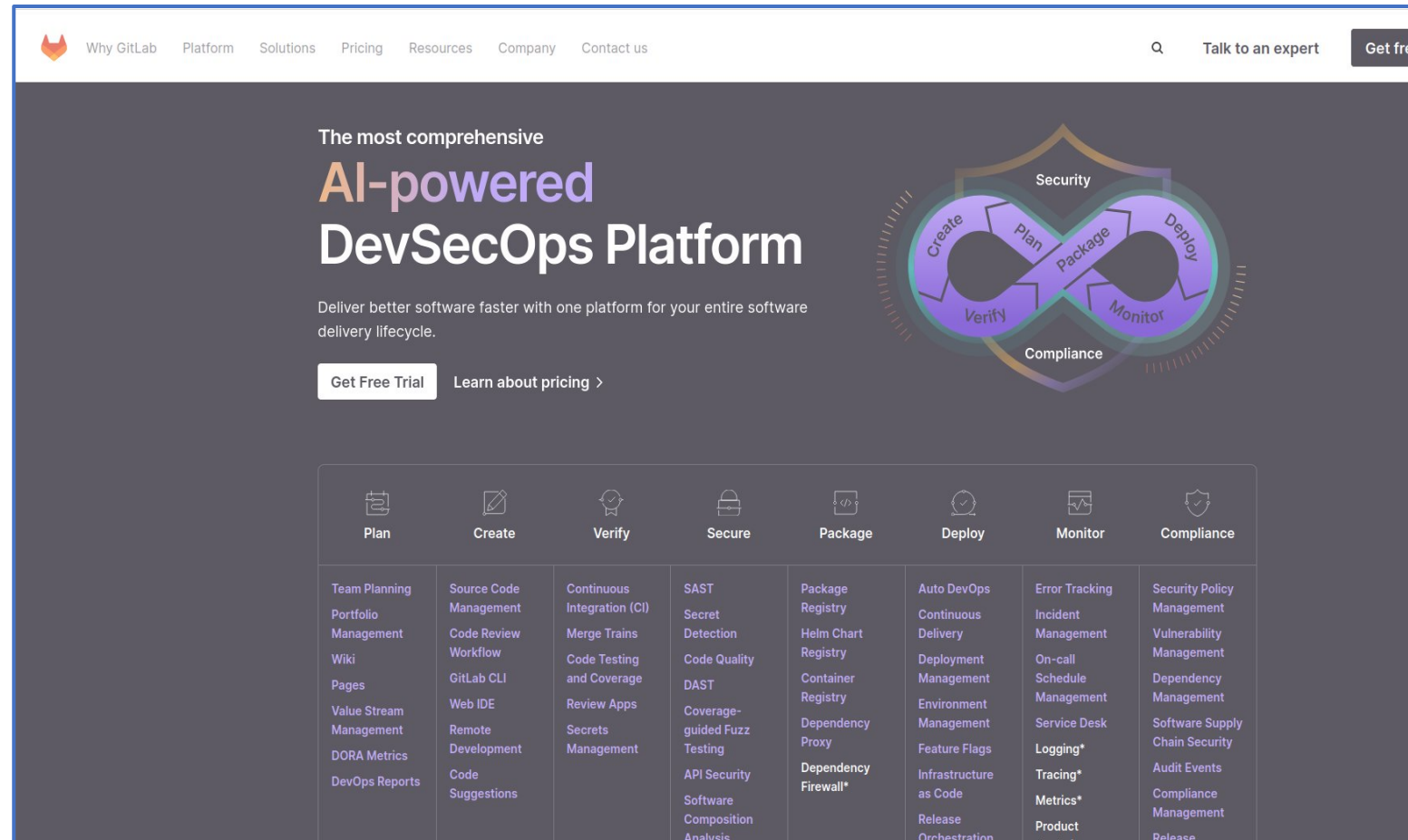
Git based repository, code review

Issue tracking, project management

Plugin and API extensibility

Integration with other tools

Suggestion: Use it for your startup.



The screenshot shows the GitLab DevSecOps Platform homepage. At the top, there's a navigation bar with links: Why GitLab, Platform, Solutions, Pricing, Resources, Company, and Contact us. On the right, there's a search icon and a button 'Talk to an expert'. The main heading is 'The most comprehensive AI-powered DevSecOps Platform'. Below this, a subheading reads 'Deliver better software faster with one platform for your entire software delivery lifecycle.' There are two buttons: 'Get Free Trial' and 'Learn about pricing >'. To the right of the text is a circular diagram representing the DevSecOps lifecycle, with stages: Create, Plan, Package, Deploy, Monitor, and Verify, all within a shield shape labeled 'Security' and 'Compliance'. Below the main content is a table with 8 columns, each representing a stage of the DevSecOps lifecycle, with icons and a list of features.

Plan	Create	Verify	Secure	Package	Deploy	Monitor	Compliance
Team Planning Portfolio Management Wiki Pages Value Stream Management DORA Metrics DevOps Reports	Source Code Management Code Review Workflow GitLab CLI Web IDE Remote Development Code Suggestions	Continuous Integration (CI) Merge Trains Code Testing and Coverage Review Apps Secrets Management	SAST Secret Detection Code Quality DAST Coverage-guided Fuzz Testing API Security Software Composition Analysis	Package Registry Helm Chart Registry Container Registry Dependency Proxy Dependency Firewall*	Auto DevOps Continuous Delivery Deployment Management Environment Management Feature Flags Infrastructure as Code Release Orchestration	Error Tracking Incident Management On-call Schedule Management Service Desk Logging* Tracing* Metrics* Product	Security Policy Management Vulnerability Management Dependency Management Software Supply Chain Security Audit Events Compliance Management Release

Grafana

Analytics and visualization platform

Mainly for monitoring and observability

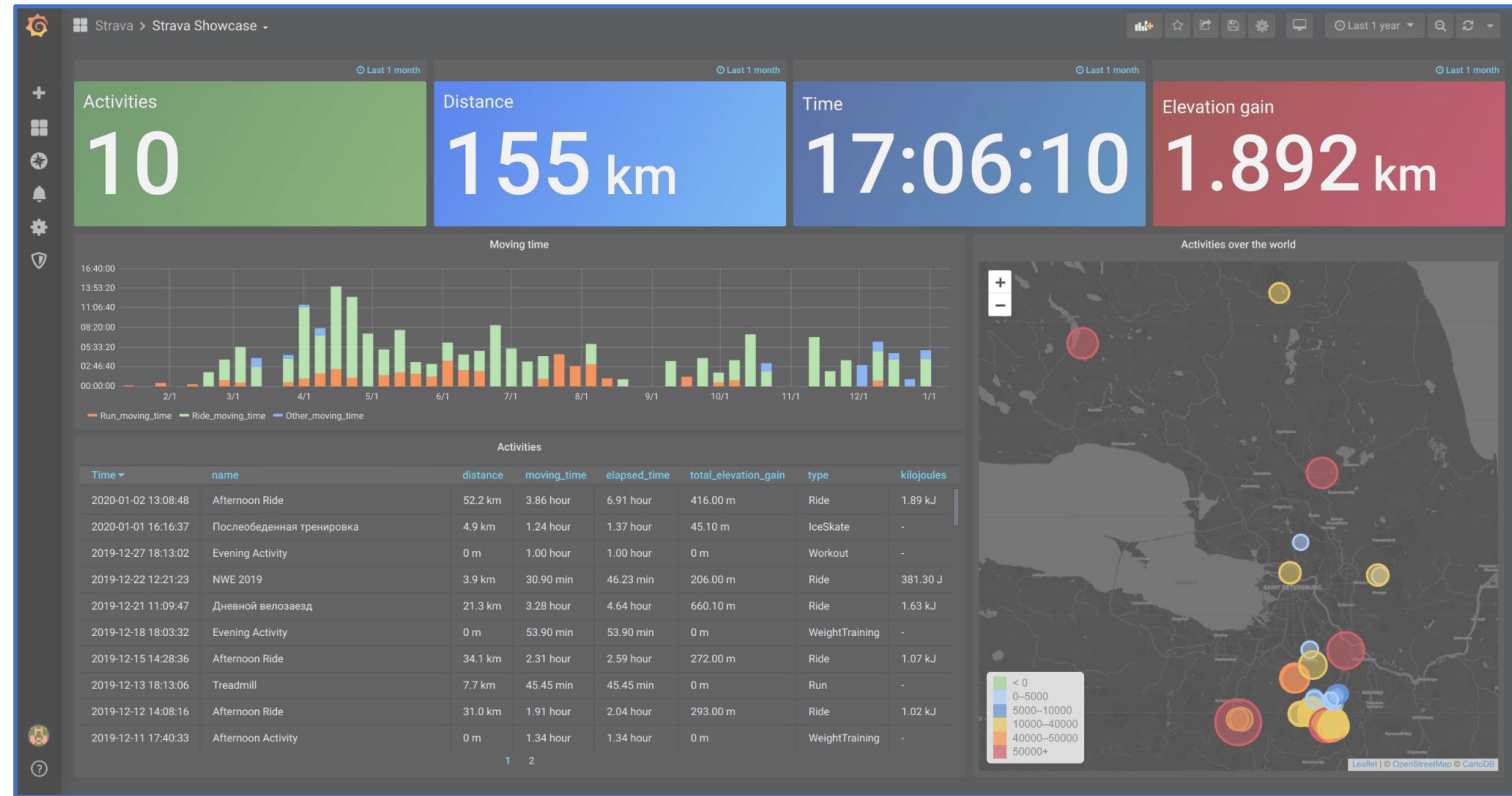
User authentication available

Integration with most databases

Dynamic alerting and anomaly checks

Extensible with plugins

Suggestion: Use it for IoT systems, logs and observability

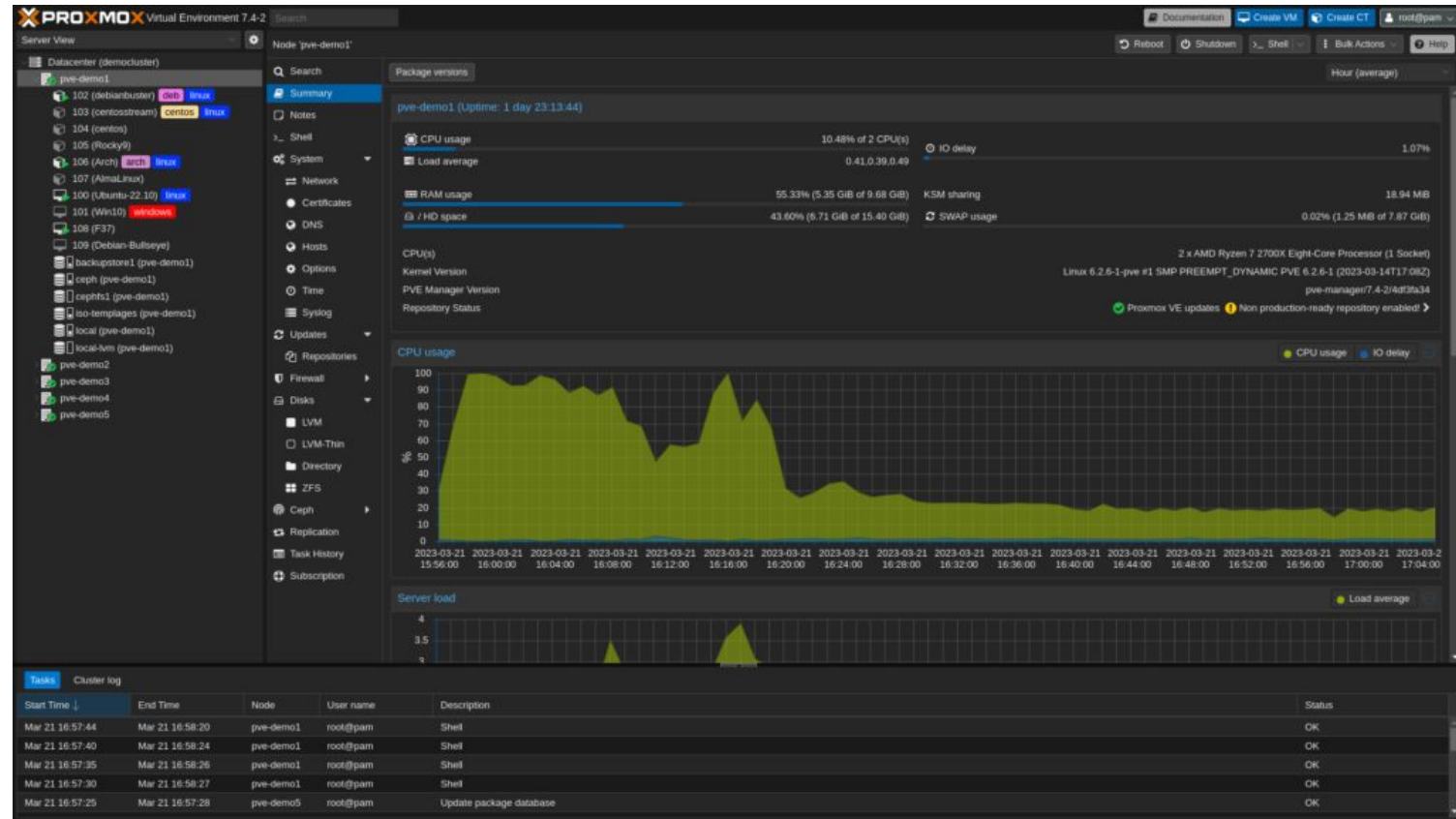


Virtualization: Proxmox & VirtualBox

Proxmox is an open-source virtualization platform that combines the KVM hypervisor and Linux Containers (LXC) on a single web-based interface combines KVM hypervisor and Linux Containers for virtualization, managed through a web interface, ideal for data centers and also for fancy home setups.

VirtualBox is a free and open-source virtualization software developed by Oracle, allowing users to run multiple operating systems simultaneously on a single physical machine, and it's perfect for testing and development purposes.

Suggestion: From enterprise to simple usage.



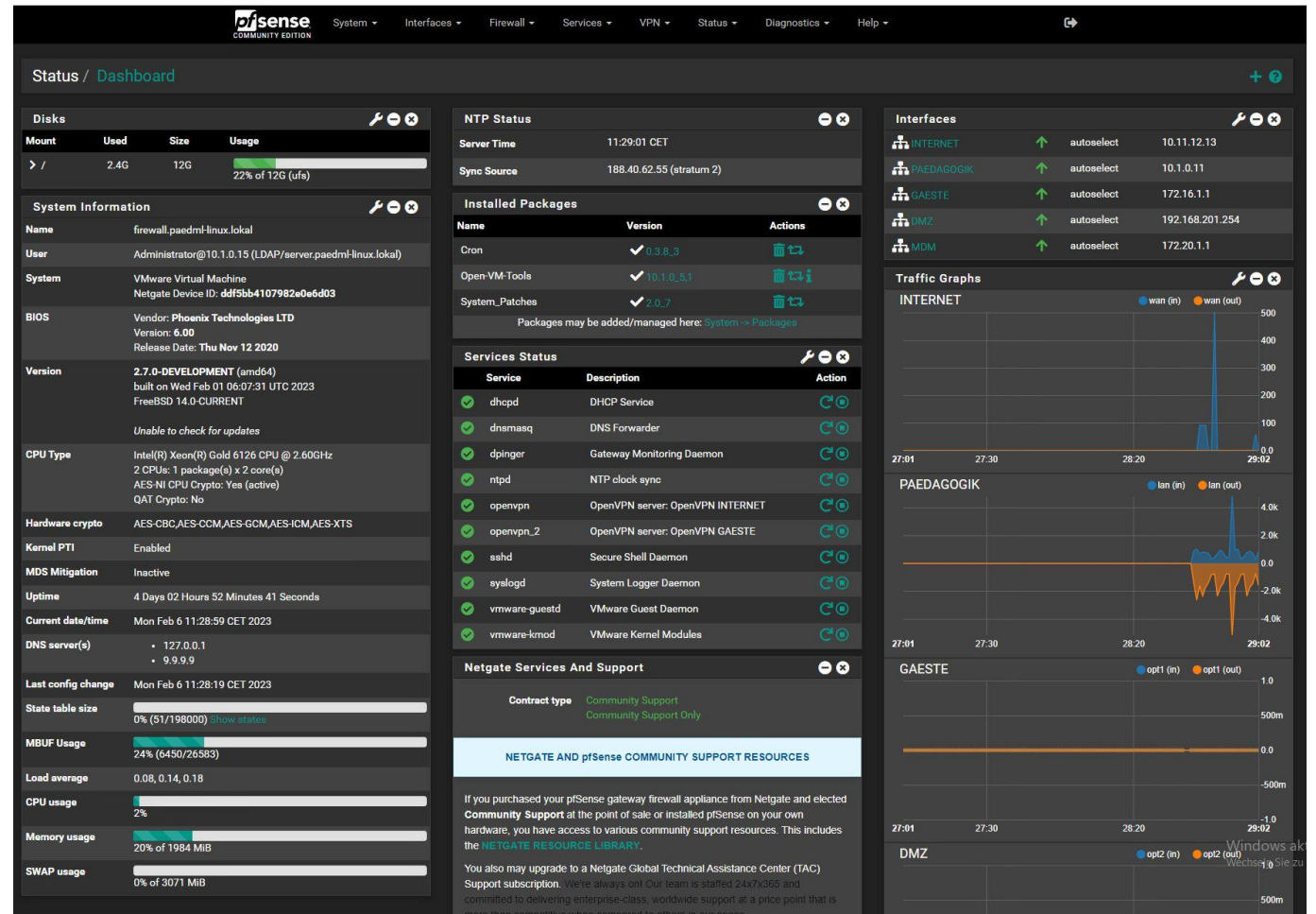
Networking: pfSense, OpenSense, IP Cop

pfSense provides robust network security and routing capabilities through an open-source firewall distribution.

OpenSense (just like pfSense) offers customizable features for network security and routing tasks, based on open-source principles.

IPCop is an open-source firewall solution focused on network security and routing functionalities, providing a flexible and reliable platform for small to medium-sized networks.

Suggestion: From enterprise to simple usage with powerful features



For Cybersecurity

OSINT

Open-Source Intelligence

The first phase of understanding target

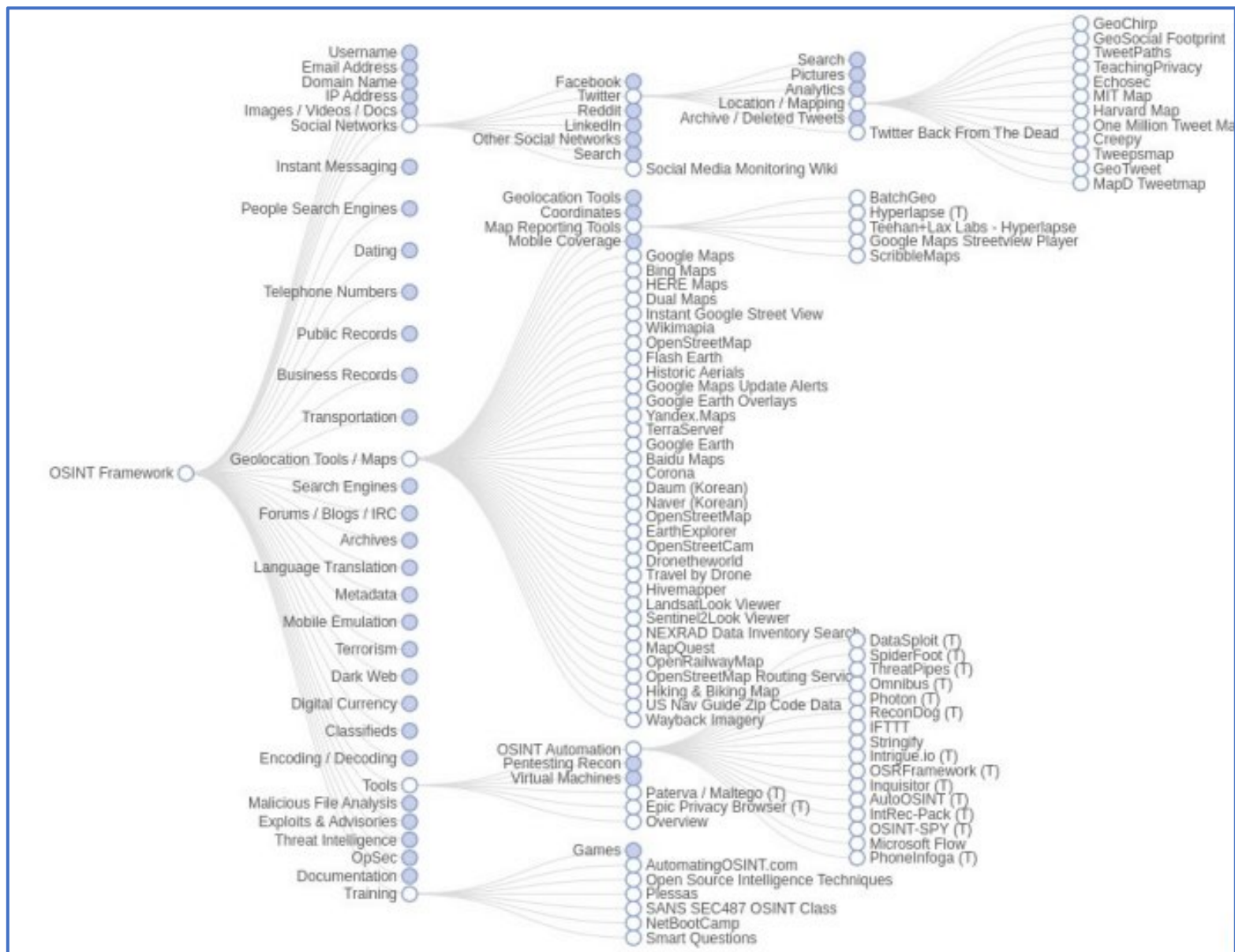
Data from publicly available info

Includes media, internet, govt, publications

Extensive list of tools

Inferences support further research

Suggestion: Start from here for cyber!



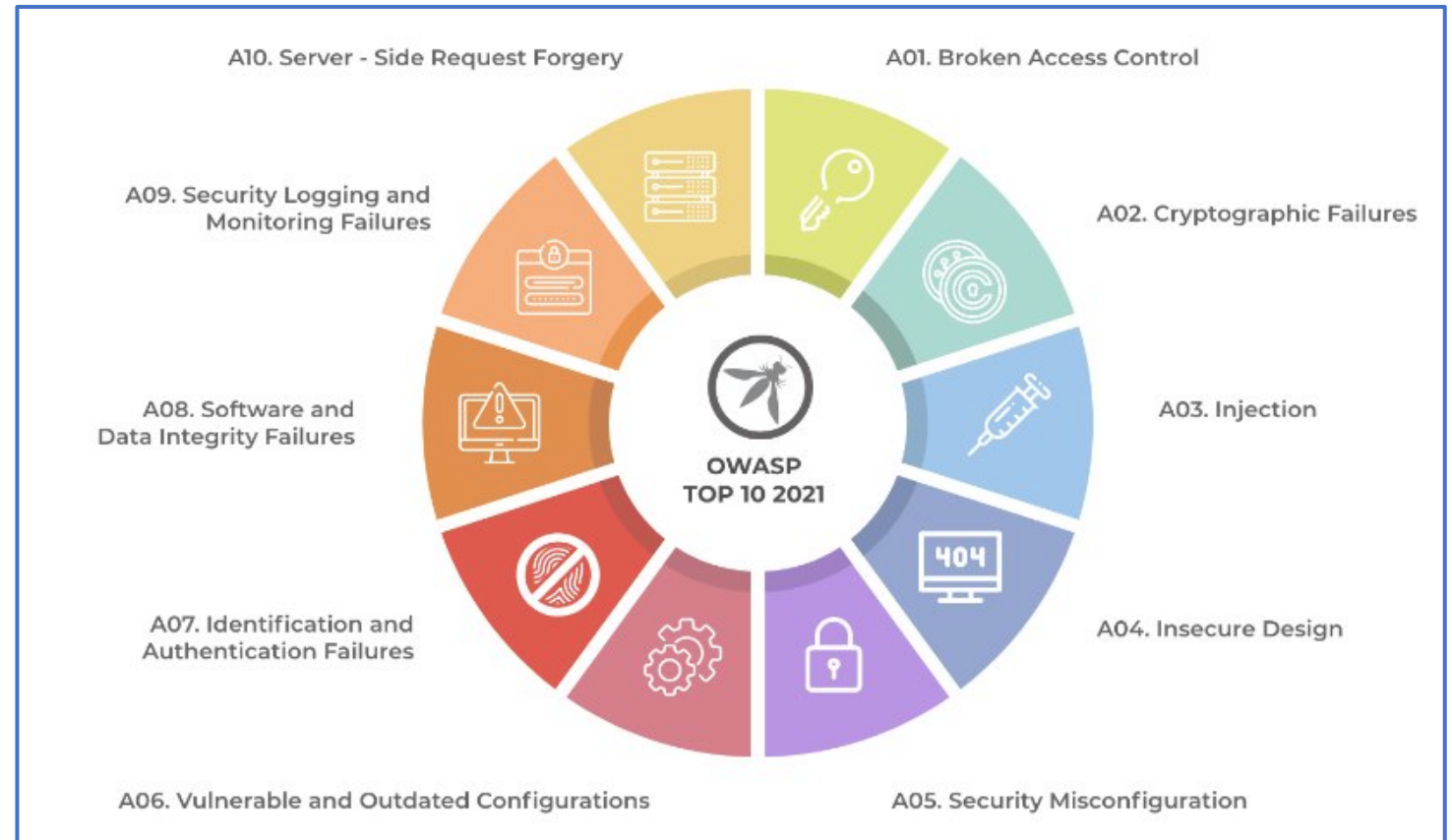
OWASP

Concise list of critical security risks
For web applications of organizations

Providing prioritized guidance
Address common vulnerabilities effectively

OWASP Top 10 List, ZAP and ASVS
Includes resources, tools, best practices

Suggestion: Learn it for your daily tasks.



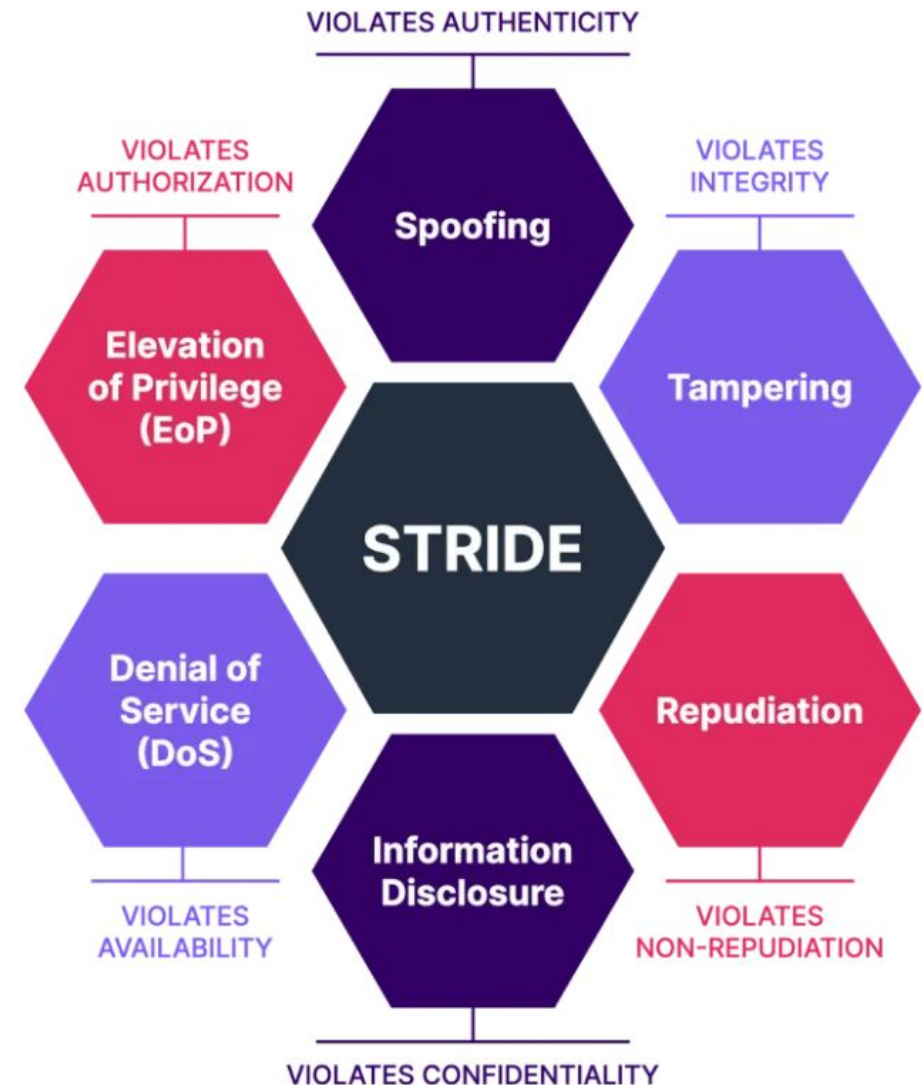
STRIDE

Threat modeling used in information security and software development (SDLC)

Identification and categorization of potential threats to software system

STRIDE: Spoofing, Tampering, Repudiation, Information Disclosure, Denial of Service, Elevation of Privilege

Suggestion: Learn it for your daily tasks.



Metasploit

A penetration testing framework

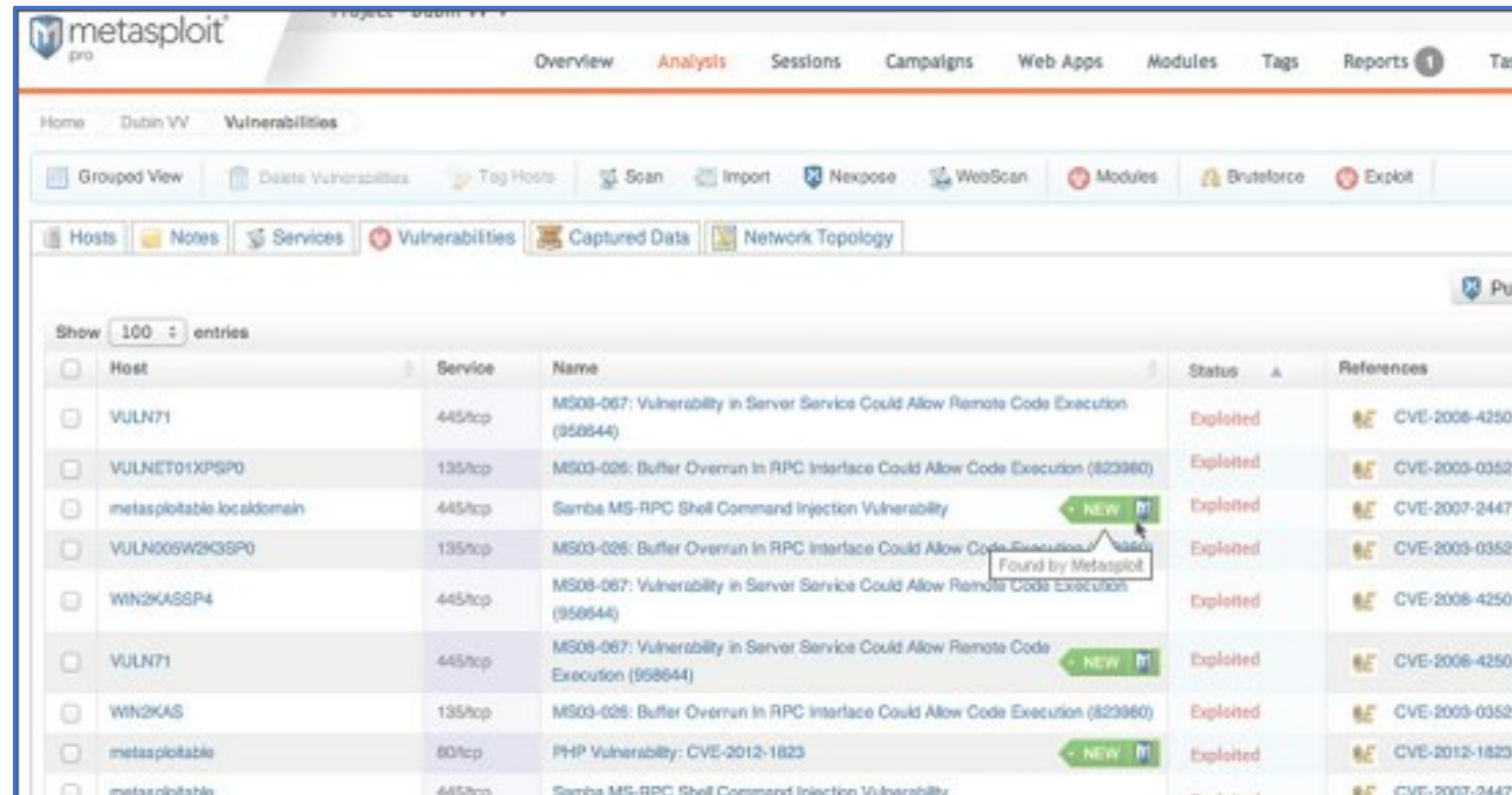
Assess and exploit vulnerabilities

Supports reconnaissance and post-exploit

Library of pre-built exploits and payloads

Integration with tools for workflow

Extensive community



For Machine Learning (AI)

Jupyter Notebook

Create cool reports on the go

Try each block of code while writing it

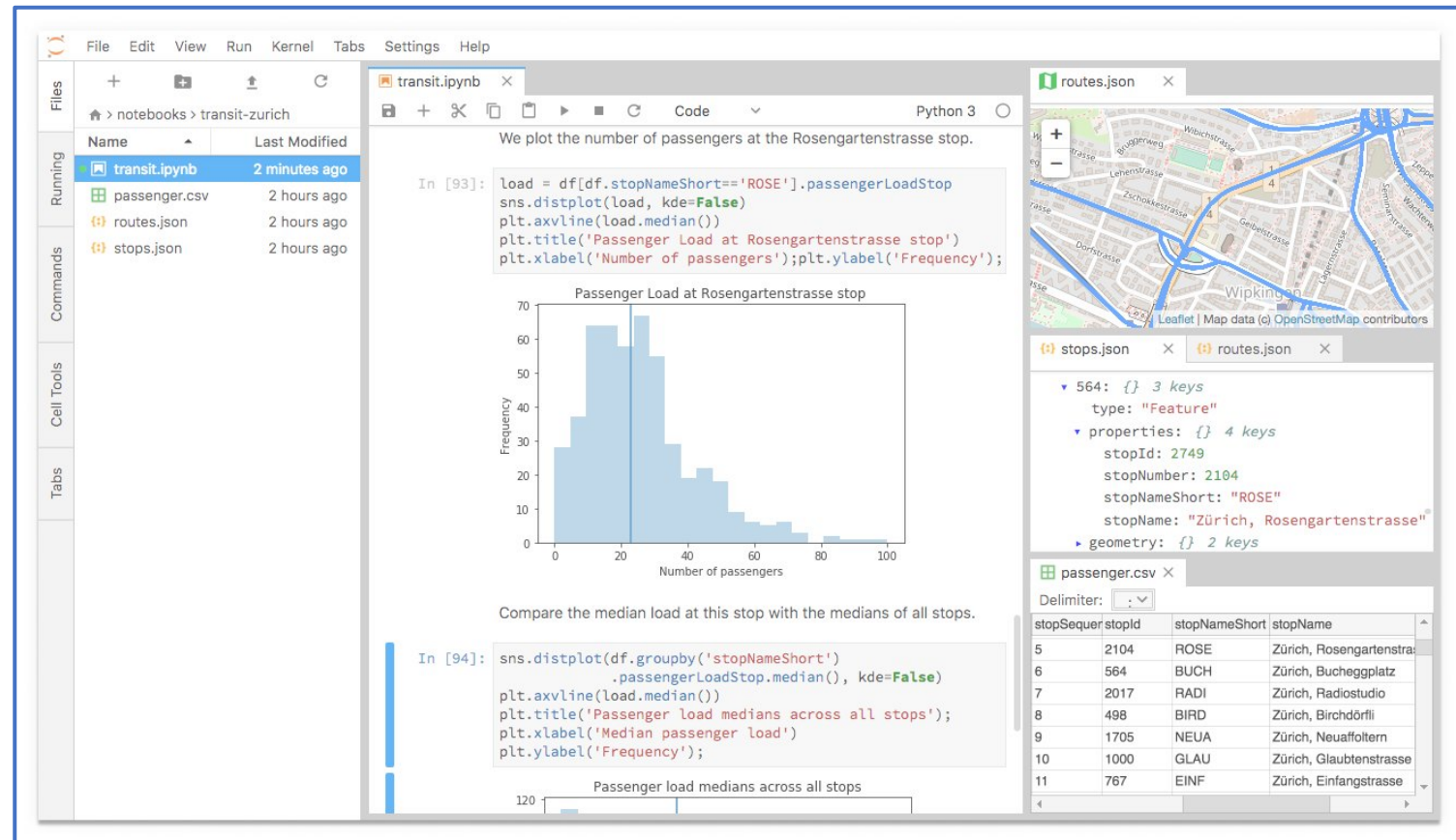
Supports multiple prog. languages

Used for data analysis, machine learning, ...

Iteratively improve your code

Extensive examples online, easy to re-run

Suggestion: Very good start if data is your go-to.



Scikit-Learn

Easy to start ML Toolkit

For data analysis and predictive models

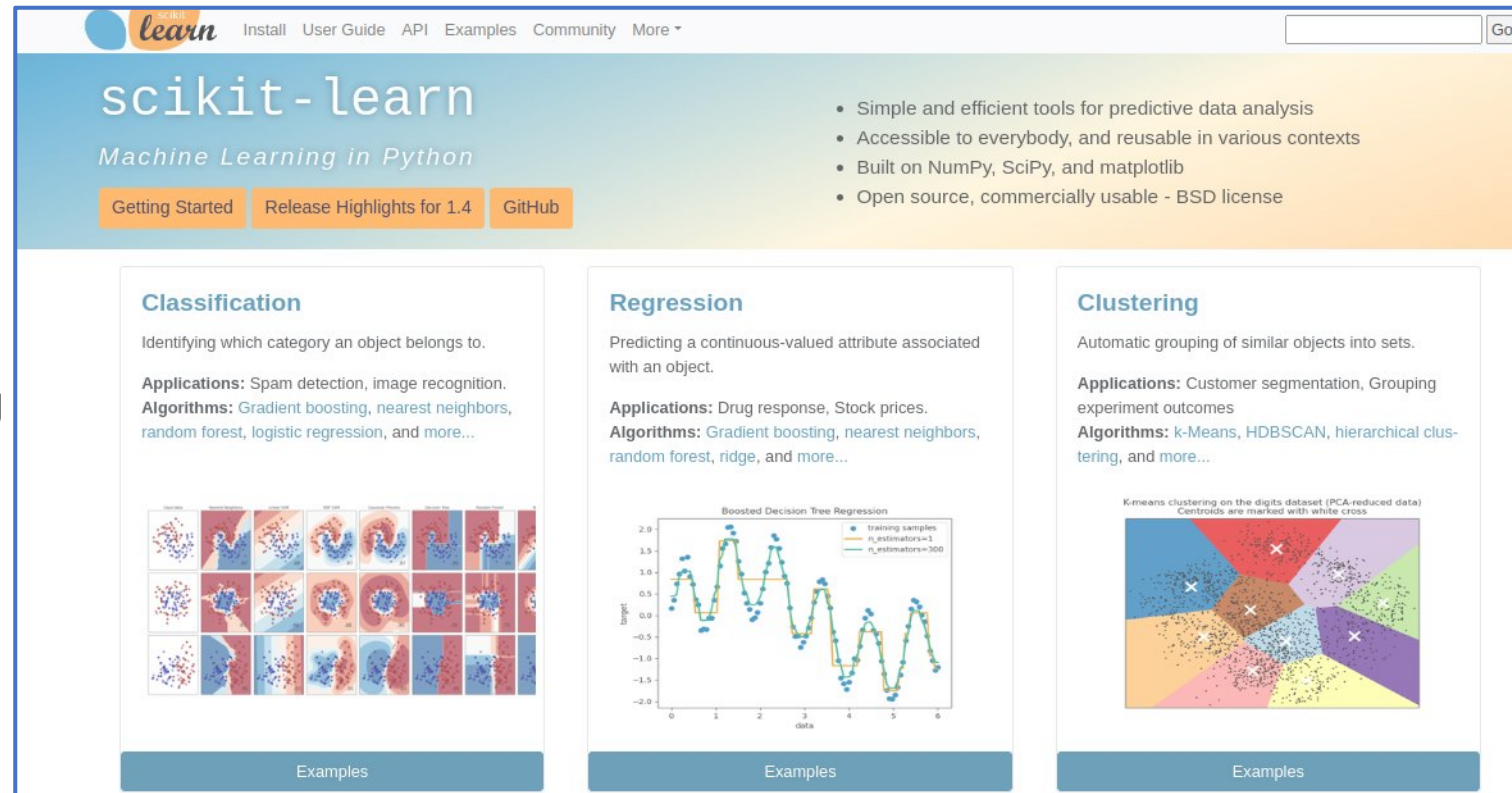
Classification, regression, clustering, ...

Pipeline support for advanced preprocessing

Integratable with other packages

Rapid prototyping possible with datasets

Suggestion: Start here for your ML path.



The screenshot shows the Scikit-Learn website homepage. At the top, there is a navigation bar with links: Install, User Guide, API, Examples, Community, and More. The main header features the 'scikit-learn' logo and the tagline 'Machine Learning in Python'. Below the header, there are three buttons: 'Getting Started', 'Release Highlights for 1.4', and 'GitHub'. To the right of these buttons, there is a list of bullet points: 'Simple and efficient tools for predictive data analysis', 'Accessible to everybody, and reusable in various contexts', 'Built on NumPy, SciPy, and matplotlib', and 'Open source, commercially usable - BSD license'. The main content area is divided into three columns: 'Classification', 'Regression', and 'Clustering'. Each column has a title, a brief description, 'Applications', 'Algorithms', and a visual example. The 'Classification' column shows a grid of 12 small plots. The 'Regression' column shows a line plot titled 'Boosted Decision Tree Regression'. The 'Clustering' column shows a scatter plot titled 'K-means clustering on the digits dataset (PCA-reduced data)'. Each column has an 'Examples' button at the bottom.

scikit-learn
Machine Learning in Python

- Simple and efficient tools for predictive data analysis
- Accessible to everybody, and reusable in various contexts
- Built on NumPy, SciPy, and matplotlib
- Open source, commercially usable - BSD license

Classification
Identifying which category an object belongs to.
Applications: Spam detection, image recognition.
Algorithms: Gradient boosting, nearest neighbors, random forest, logistic regression, and more...

Regression
Predicting a continuous-valued attribute associated with an object.
Applications: Drug response, Stock prices.
Algorithms: Gradient boosting, nearest neighbors, random forest, ridge, and more...

Clustering
Automatic grouping of similar objects into sets.
Applications: Customer segmentation, Grouping experiment outcomes
Algorithms: k-Means, HDBSCAN, hierarchical clustering, and more...

Examples

TensorFlow

A machine learning library for ML algorithms

Simplifies creation and tuning of sophisticated algo

Scalable and efficient

Good for deployment of AI models across platforms

Enhances prototyping and experimentation

Enables quicker iterations and innovation

Suggestion: Start here for advanced production models.



Hugging Face

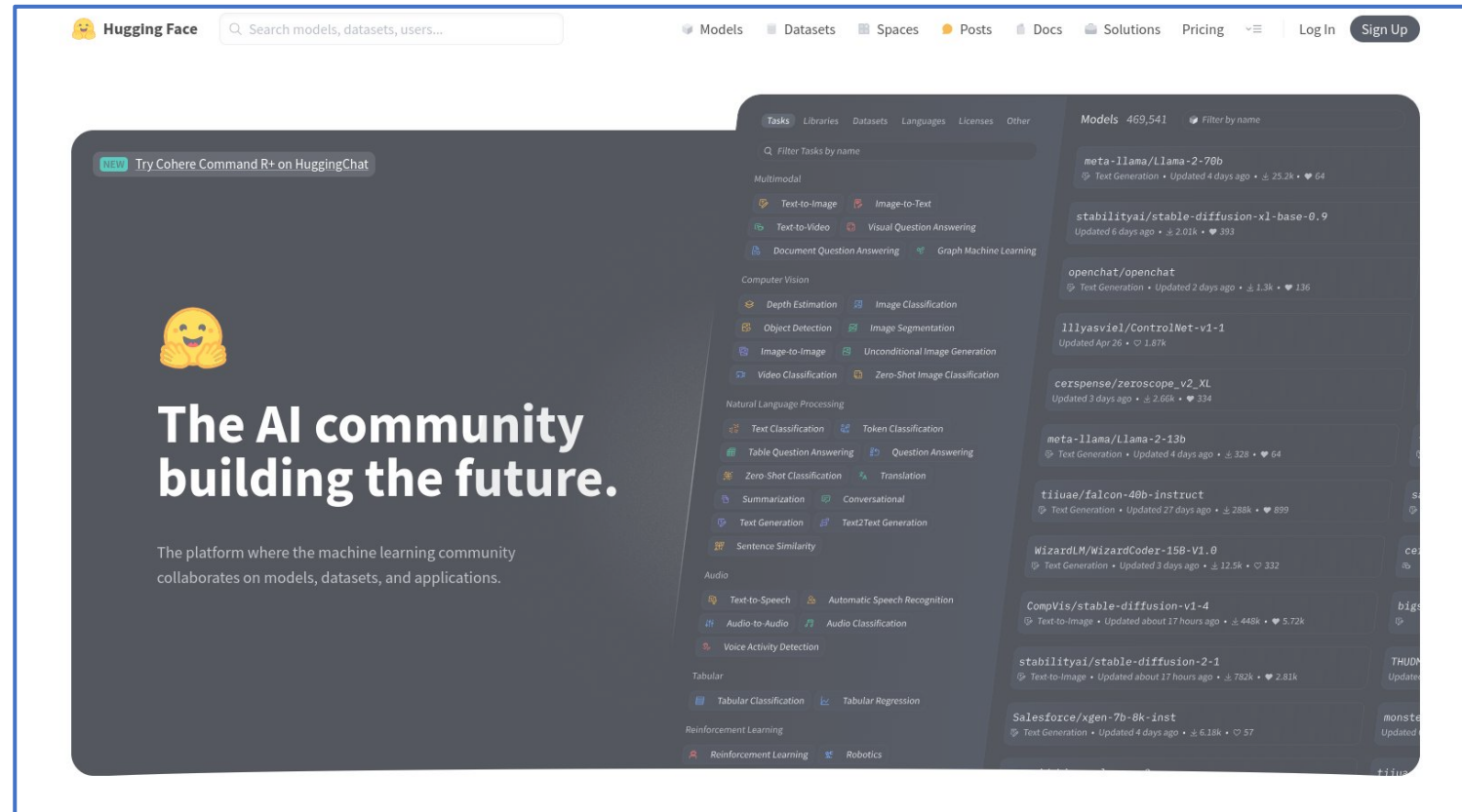
Platform for pre-trained models for NLP
Text classification, sentiment analysis, ...

Easy to use library for transformers
Hub for finding open-source models

Interactive Colab environments

Committed to innovation

Suggestion: Start here for advanced production models.



Tech support for other professions

(for Architects , Urbanists, ...)

Blender

Modeling: Extensive modeling tools for creating, transforming, and editing your models.

Simulation: Powerful simulation tools for creating realistic effects like smoke, fire, and fluid.

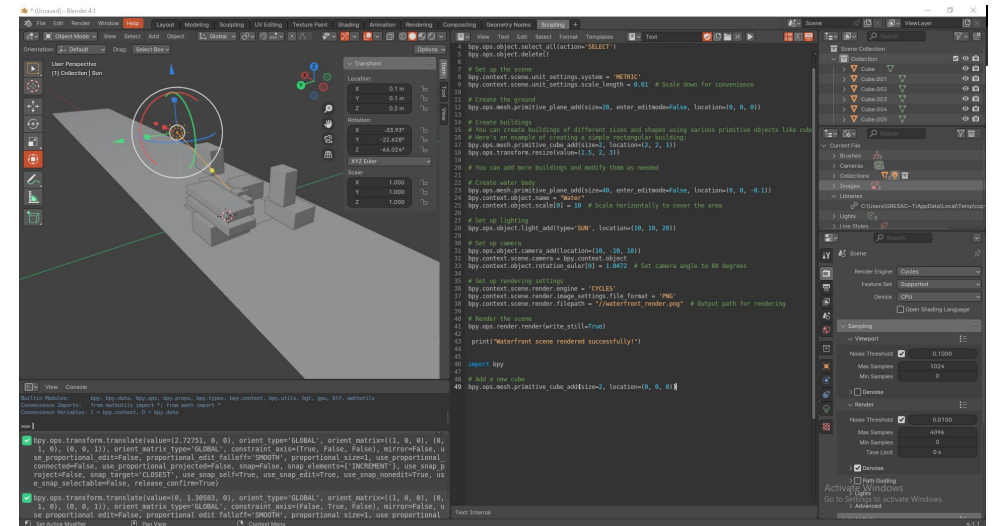
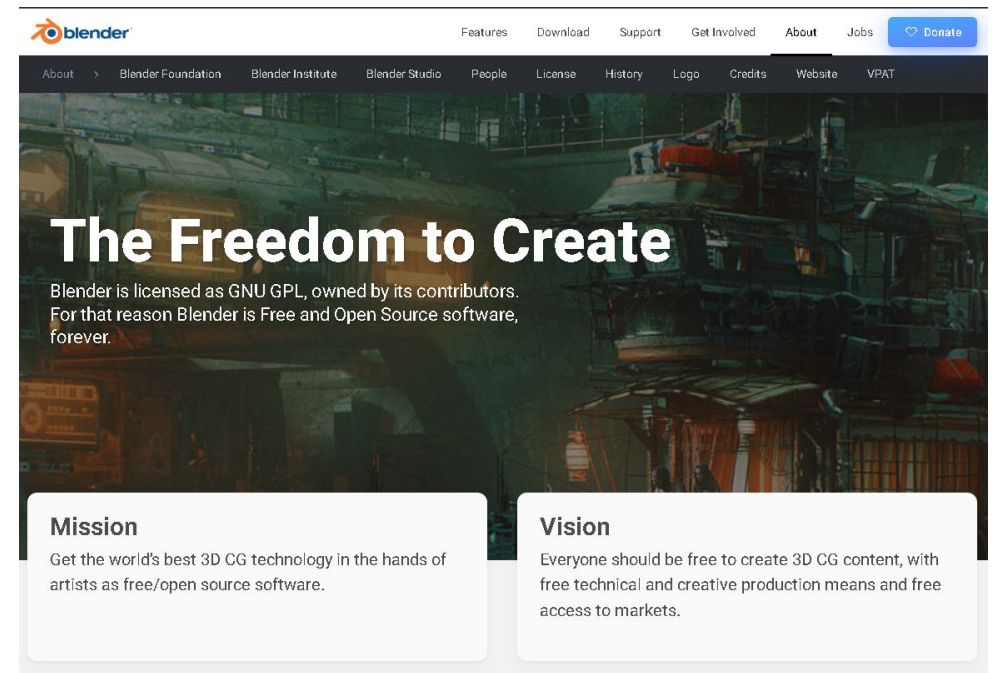
Rendering: Pipeline Integration

Workflow: Customizable interface with themes and layout options.

Animation and Storytelling:

Timeline-based animation with keyframes and curves.

Suggestion: If you work with Architecture, Animation, Gaming, Planning
- COOL kinda PEOPLE



QGIS

View, analyze, edit geospatial data

Supports raster, vector, and database data

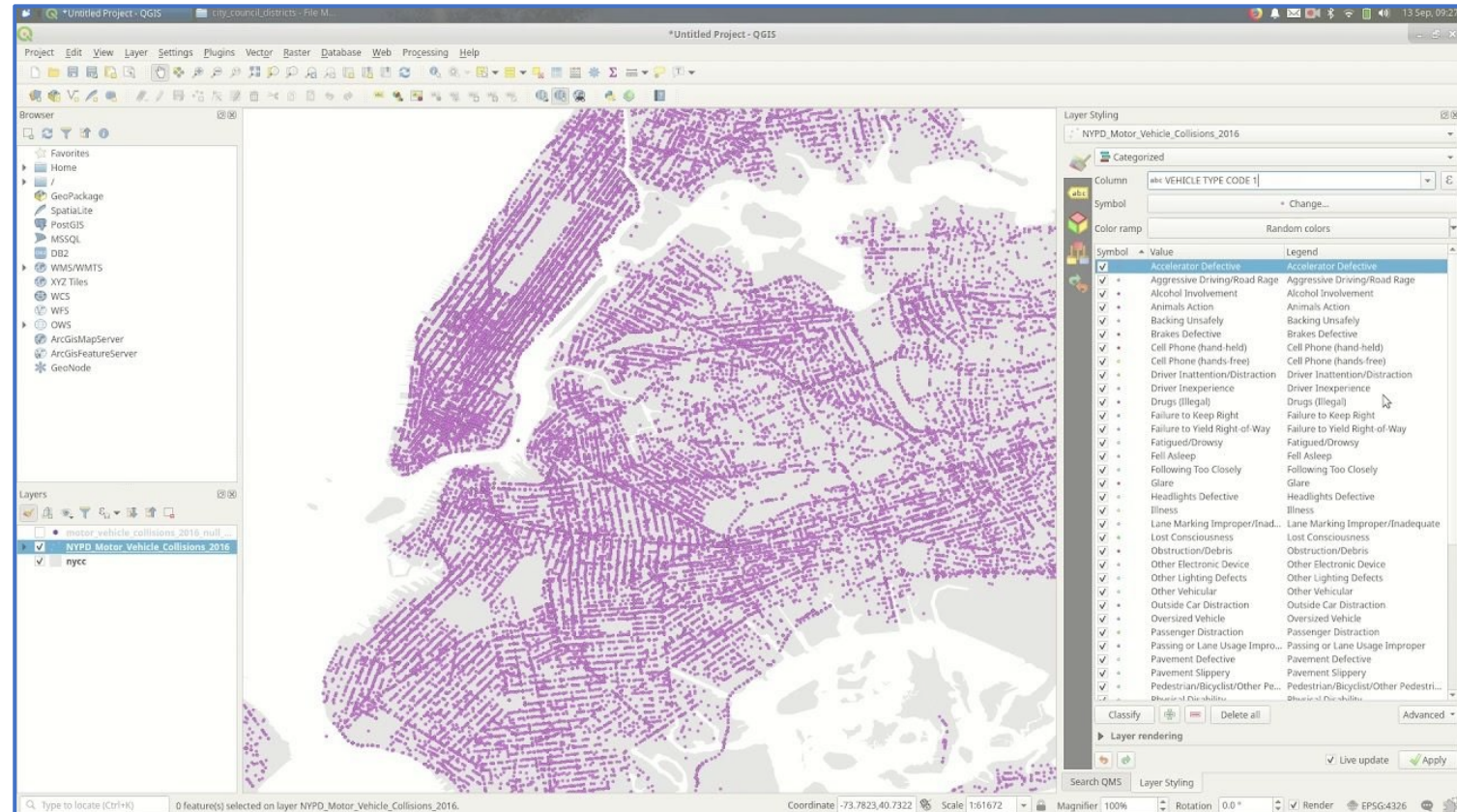
Easy to get started toolkit

Extensive plugin ecosystem

Big community of supporters

Advanced features and integrations possible

Suggestion: If you work with geo, transport, environment.



Contributors

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Anisa - Cyber, Web

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Gresa - Arch Support

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...

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