ANACONDA.

The World's Most Popular
Data Science Platform

What's Inside

Gone are the days when the word "Python" merely referred to a large, nonvenomous snake. The term now signifies a widely-used, multi-purpose programming language. In fact, Python has become the most popular programming language, and for good reason. Python is a very accessible language that facilitates a wide variety of programming-driven tasks. As such, there are hundreds of thousands of Python packages available that provide modules and tools for common functionality. This sheer volume of packages* makes Python applicable for a wide variety of use cases. Because of its accessibility and broad reach, Python is widely used by non-programmers and students in addition to programming experts, and it makes a great teaching language for machine learning (ML) and artificial intelligence (AI).

*
Packages are individual units of installable code.

The popularity of Python for data science continues to grow. In Anaconda's 2021 State of Data Science report, 63% of respondents said they use Python frequently or always, making it the most popular language of those included in the survey.

Alongside Python's rise in popularity, data scientists are turning away from more traditional, proprietary languages like MATLAB and SAS and toward the open-source ecosystem. The velocity of innovation powered by the community cannot be matched or outpaced by any single technology vendor, and more and more organizations are adopting open-source software for enterprise use. According to the above-referenced report, **65% of survey respondents said their employers are encouraging them to contribute to open-source projects**.

2021 saw approximately 5 *billion* package downloads from the Anaconda repository—and more than 25 million users choose Anaconda to power their data science and AI workflows, making Anaconda the world's most popular data science platform and the foundation of modern machine learning. Anaconda has pioneered the use of Python for data science, championed its vibrant community, and continues to steward open-source projects that make tomorrow's innovation possible. Our enterprise-grade solutions enable corporate, research, and academic institutions to harness the power of open source for competitive advantage, groundbreaking research, and a better world.

How Often Do Respondents Use Python?

34%
Always

29%
Frequently

4%
Never

11%
Rarely

22%
Sometimes
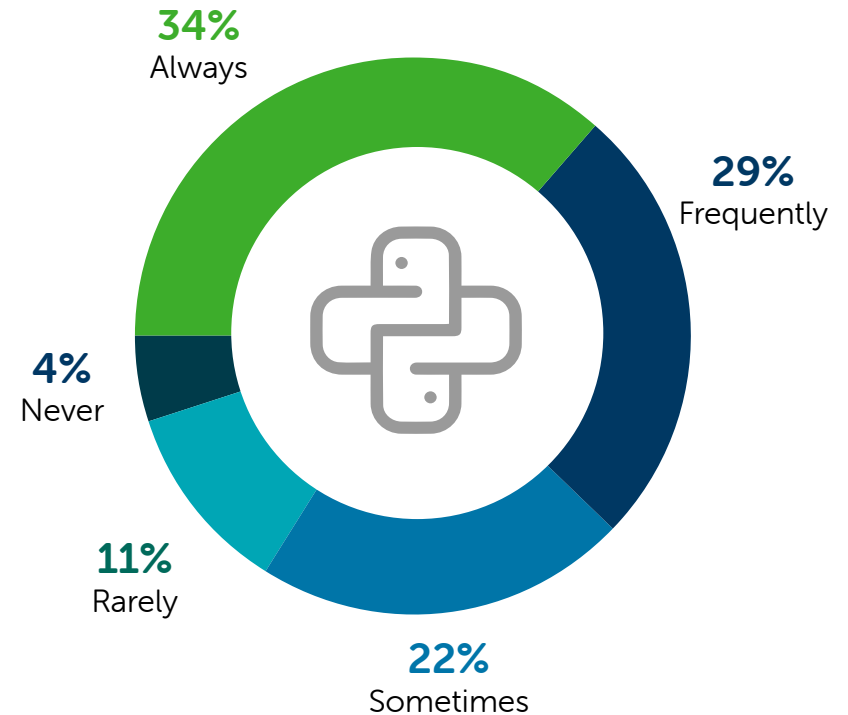
Source: State of Data Science 2021

n=3,104

"

Open-source packages have been the biggest enabler for data science we've seen in recent years. Being able to offer a set of trusted tools from Anaconda will empower our customers through every stage of the data science journey on Microsoft Azure.

-Mark Russinovich, Chief Technology Officer and Technical Fellow, Microsoft Azure

Anaconda's **mission** is multifaceted:

Create a platform where data science users, open-source contributors, AI researchers, and technology providers can discover, share, and sell their innovations.

Drive widespread adoption of modern data analysis by creating an excellent user experience and helping customers integrate tools and techniques throughout their organizations.

Steward open-source innovation by fostering communities and championing open standards for data and computation.

Create a place where people do meaningful work that embodies our core values.

This guide serves to show why Anaconda is the **go-to choice for open-source data science.** It covers package and environment management, benefits of Anaconda, Anaconda's broad reach in terms of user groups, and more.

Package and Environment Management

Python is heavily used for numerical computing and data analysis, and its packages often require complex build steps. Python is used across different operating systems and hardware, which introduces another layer of complexity, and its built-in packaging system does not properly support these complexities.

Most projects in the Python open-source software (OSS) ecosystem depend on many other projects to function, and this forms a chain of complexities called the "dependency graph." Open-source projects are managed independently and release updates asynchronously. Thus, a package manager is needed to ensure package and platform interoperability. Without one, the chain of dependencies can become unmanageable; packages may depend on incompatible versions of other packages, and obtaining different versions of those other packages may break other dependencies and push the problem downstream. In other words, chaos ensues.

Anaconda was built to cut through—and prevent—the chaos. Let's take a closer look at the components that make this possible.

> **"**
>
> Anaconda is an established leader in Python package management, with a track record of responsible behavior. The entire Python ecosystem trusts Anaconda.
>
> **-Jharrod LaFon, Vice President, Cloud Development, OpenEye Scientific**

CONDA®

Conda is Anaconda's package, environment, and dependency manager. It is cross-platform (Windows, macOS, Linux [x86/AARCH64/PPC64LE/s390x]), cross-language (supports Python, R, C/C++, Rust, Go, and more), and ensures package compatibility and environment correctness. Conda packages are pre-compiled for multiple platforms using a Conda build recipe and made available in repositories where users can use Conda to install them. Because Conda is language-agnostic, it can easily manage packages with binary dependencies. Conda makes it easy to install many of the most commonly used numerical computing packages.

Conda is particularly helpful when it comes to reproducibility and deployment of applications into multiple environments. Models and applications written on one computer can easily be ported to another, regardless of platform. This type of interoperability continues to steward our core values of widespread adoption, sharing, and collaboration. There are over 25 million active Conda users, with a 34% increase in active Conda users from 2020 to 2021.

⊙ Learn more about Conda [here](#).

ANACONDA.NAVIGATOR

Anaconda Navigator, Conda's graphical user interface (GUI), makes it easy to launch and integrate applications with Conda's package and environment management system.

When installed as part of the Anaconda Distribution, Navigator comes preloaded with a curated set of more than 300 data science and machine learning packages, and serves as a desktop application that easily installs additional packages from the Conda ecosystem.

Learn more about and download Anaconda Navigator here.
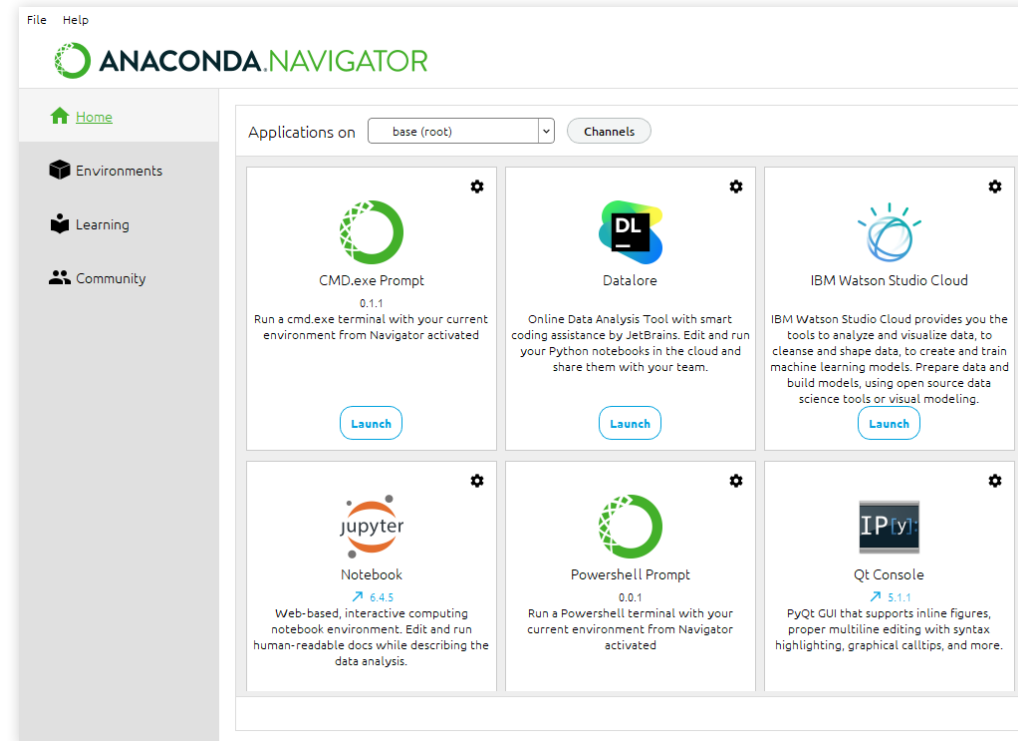
mini**CONDA**

Miniconda is an installer that contains only Python, Conda, and Conda's dependencies. It is the minimal way to bootstrap Conda onto a system. Miniconda is popular amongst users who know exactly what packages they want. It is often used alongside Docker deployments, and for Continuous Integration (CI)/ Continuous Deployment (CD). Miniconda can be embedded inside other products and environments.

Learn more about and download Miniconda [here](#).

Conda latest

Search docs

Conda

Conda-build

⊟ Miniconda

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    Latest Miniconda Installer Links

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Conda license

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Docs » Miniconda

Miniconda

Miniconda is a free minimal installer for conda. It is a small, bootstrap version of Anaconda that includes only co useful packages, including pip, zlib and a few others. Use the `conda install` command to install 720+ additional

See if Miniconda is right for you.

System requirements

- License: Free use and redistribution under the terms of the EULA for Miniconda.
- Operating system: Windows 8 or newer, 64-bit macOS 10.13+, or Linux, including Ubuntu, RedHat, CentOS
- If your operating system is older than what is currently supported, you can find older versions of the Minicor
- System architecture: Windows- 64-bit x86, 32-bit x86; macOS- 64-bit x86 & Apple M1 (ARM64); Linux- 64 Power8/Power9, s390x (Linux on IBM Z & LinuxONE).
- The `linux-aarch64` Miniconda installer requires `glibc >=2.26` and thus will **not** work with CentOS 7, Ubuntu
- Minimum 400 MB disk space to download and install.

On Windows, macOS, and Linux, it is best to install Miniconda for the local user, which does not require admini you need to, you can install Miniconda system wide, which does require administrator permissions.

Latest Miniconda Installer Links

Latest - Conda 4.11.0 Python 3.9.7 released February

Platform	Name	SHA256 hash
Windows	Miniconda3 Windows 64-bit	`60131S2b169c2c2d4bcd75bb0`
	Miniconda3 Windows 32-bit	`12a3a7e8aab7a974705ea4ee5`
MacOSX	Miniconda3 MacOSX 64-bit bash	`77172S3065e7c09339cd3d081`
	Miniconda3 MacOSX 64-bit pkg	`d3e63d7e8aa2ffh7b095e6b90`

Anaconda-Hosted Repositories:

▶ **anaconda.org:**

Community-led hosting of published conda packages. Includes open-source repositories and channels such as conda-forge, PyTorch, and commercial partners like NVIDIA and Intel.

▶ **repo.anaconda.com:**

Default location where Conda looks for updates and packages. Only Anaconda, Inc. can publish to this repo.

▶ **repo.anaconda.cloud:**

Anaconda's premium repository that can only be accessed with a token. Compiled packages in this repository prioritize cross-package and platform interoperability and stability, and embed additional security features into our package metadata. Only Anaconda, Inc. can publish to this repo. Packages in repo.anaconda.cloud are:

Secure:	**Compatible:**	**Uniform:**	**Reproducible:**	**Supported:**
packages are built and maintained on a private, high-security network by Anaconda employees.	packages are built in a consistent manner with dependency information so they can work together reliably. They are rigorously tested to ensure functionality in a known environment.	the user experience for managing packages is the same across operating systems (Windows, Mac, and Linux) and languages (Python, R, C, C++, etc).	exact package versions can be recorded (when needed) and used to recreate environments seamlessly across platforms.	when compatibility issues do arise, customers can receive support directly from Anaconda.

Benefits of Anaconda

As previously mentioned, Conda is Anaconda's package and environment manager. Conda itself is a huge benefit to Anaconda users as it natively solves for complex dependencies. While Conda is mainly used for Python and R, it can also support C++, Java, Rust, and others. Conda can work on any major operating system without requiring administrator privileges. Ultimately, Conda is designed to handle the expansive and specific needs of data scientists and others doing numerical computing.

Beyond its beneficial *functionalities*, there are experiential pluses to using Anaconda:

1 Anaconda makes it easy for beginners to get started with data science. An Anaconda Distribution install comes with a desktop GUI that is preloaded with the most popular data science and machine learning packages. As such, Anaconda is widely used by universities and bootcamps to teach Python, and learners become acquainted with it at the start of their data science careers.

2 Developers and data scientists can collaborate more seamlessly and quickly by using Anaconda's packaging and software environment management tools.

3 Users working alone also benefit from Anaconda's packaging technology. They can quickly and safely use different versions of software packages, thereby allowing them to try new innovation features without jeopardizing the stability of their existing software environments and models.

4 Anaconda identifies the security vulnerabilities (CVEs) that packages and their dependencies are exposed to. We curate and enhance the accuracy of CVE data so that you can block unsafe packages with precision and make well-informed decisions.

5 Anaconda's premium package repository is curated and built from source on our secure network. Packages are verified upon installation to ensure that they are tamper-free. With a secured supply chain for open-source software, you can spend less time managing risk and more time on innovation.

6 Anaconda generates a Software Bill of Materials (SBOM) for customers in accordance with evolving security standards and best practices around the use of open source in sensitive environments. SBOMs are important because they provide visibility into the components of your software, facilitating awareness of potential risk factors and quicker reaction times should an issue arise.

7 Anaconda is part of an active community of over 25 million users. We recently created Anaconda Nucleus, an interactive site where Python students, practitioners, and experts can work, learn, and share with each other.

"

Anaconda is enabling organizations to harness the power of open-source Python innovation through ease of use and security-focused functionality.

-Christian Kleinerman, SVP, Product, [Snowflake](#)

Anaconda Engages the Community

Community is at the heart of Anaconda, and there are multiple ways in which we foster a spirit of continued learning and collaboration.

One of Anaconda's most unique offerings is Nucleus, its education and community engagement platform. The platform features a wealth of data science content ranging from articles to webinars to videos and more. It's meant to be a space for users to discover, share, and sell their innovations. The platform is intended to grow and evolve, becoming more interactive over time.

One of the most popular features of Nucleus is the Anaconda Community, a collection of forums open to Anaconda users and data practitioners of all experience levels. The forums are for asking questions, learning from experts, finding events, and—most importantly—connecting with other community members.

Visit Anaconda Nucleus here.

ANACONDA®
DIVIDEND PROGRAM
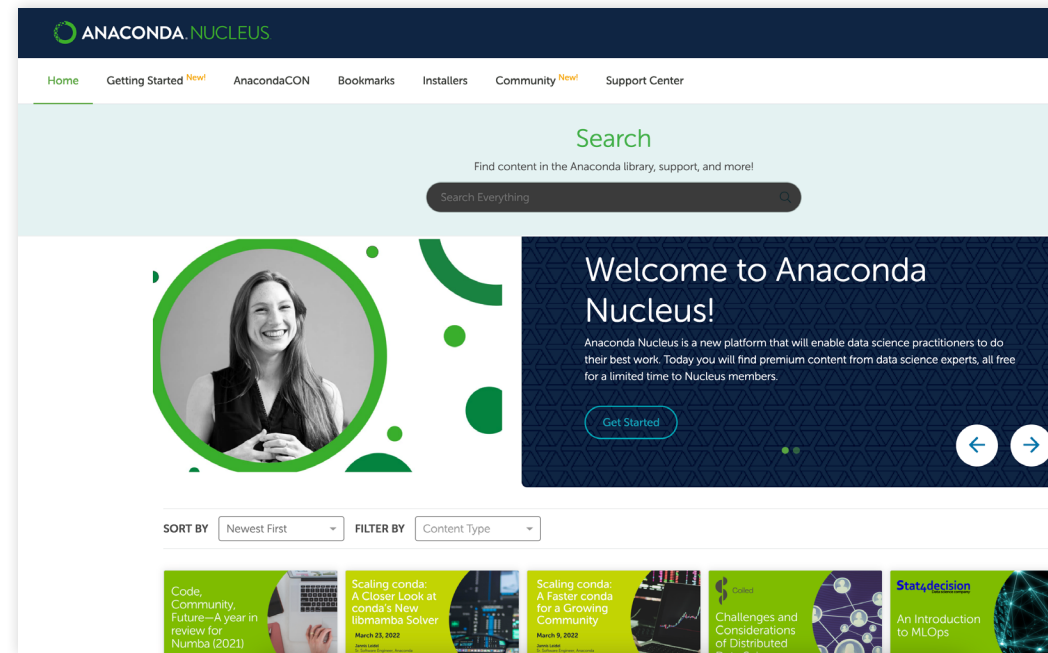
Dollars spent with Anaconda are directly invested back into the open-source community. The Anaconda Dividend Program formalizes Anaconda's commitment to direct a portion of its revenue and resources to help advance projects and innovation in data science. The goal of the program is to support diverse projects that are under-resourced and need additional exposure.

Anaconda launched the Dividend Program in partnership with NumFOCUS, a U.S.-based nonprofit organization that provides crucial administrative services and operational support for nearly 44 open-source scientific computing projects.

NUMF[O]CUS
OPEN CODE = BETTER SCIENCE

$44,735

Anaconda donated $44,735 to NumFOCUS to support open-source project development during the Dividend Program's first year.

Anaconda is honored to be a Silver Sponsor of NumFOCUS program initiatives.

Other Community Efforts

Anaconda is an active supporter of the OSS community, frequently contributing to events like PyData Global and PackagingCon. In August 2021 Anaconda sponsored the Pyston project to accelerate Python performance. In fact, Anaconda has sponsored many OSS projects over the years, including Numba, Bokeh, Dask, Intake, fsspec, fastparquet, pandas, JupyterLab, and HoloViz.

Anaconda provides free storage, networking, infrastructure, and support to large community channels like conda-forge and bioconda. Additionally, Anaconda launched a fee exemption program for non-profit research institutions.

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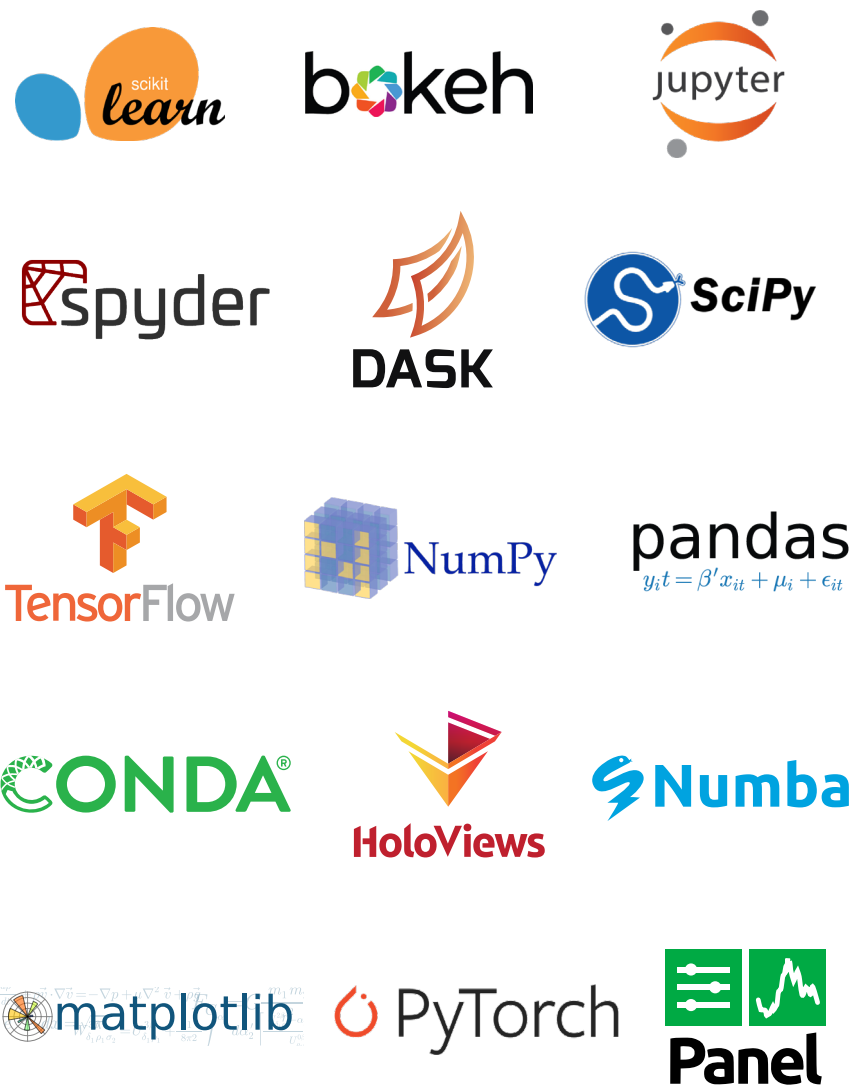
We rely on Anaconda to manage the Python packages for our research. It is fast and flexible, allowing us, for example, to easily install the latest PyTorch version and its CUDA dependencies. This enables us to train machine learning models efficiently on GPUs.

—Team Member, Potsdam Institute for Climate Impact Research (PIK)

Who Should Use Anaconda?

The short answer to this question is "just about anyone." Anaconda's ease of use makes it an attractive option for data scientists of all abilities—particularly those who wish to build and test models together, and those who value business impact and data-driven evidence. IT teams can also benefit from using Anaconda, leveraging its security and governance features to manage their infrastructure with confidence and reduce their organization's exposure to vulnerabilities. And of course Data Engineers, Business Analysts, Software Developers, and Academics can use Anaconda to streamline their workflows and deliver value—no matter their field—though this is by no means an exhaustive list of titles.

Anaconda's current list of customers runs the gamut. Clients include automotive manufacturers, energy companies, airlines, banks, and more. Employees at 99% of the top Fortune 100 Companies use Anaconda, as do employees at 82% of the top Fortune 500 companies.

How Users Describe Anaconda

In a recent survey, users described Anaconda as:

A "must have" tool for every Python user

Essential, massive time-saver

Powerful, convenient, user-friendly

De facto standard for data science environment management

Anaconda makes data science real

Simple, integrated, best package manager ever

Anaconda Embedded— Our Partner Network

Companies can partner with Anaconda to build and distribute a seamless customer experience by using Anaconda behind the scenes to power their products. Embedded partners receive access to Anaconda's experts and developers, experience guaranteed SLAs and up-time, contribute to the open-source network, and gain access to Anaconda's thriving user community.
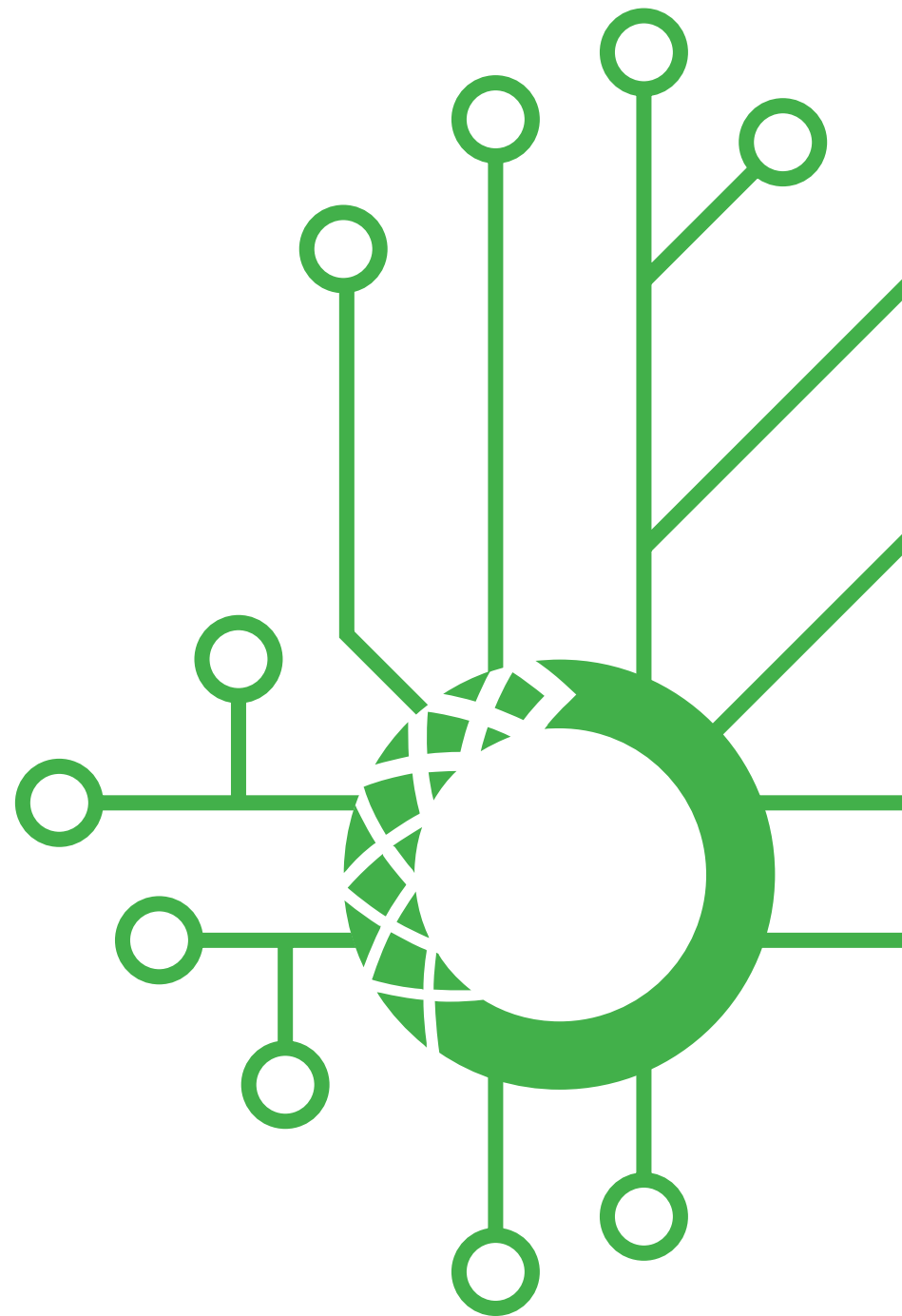
Real-World Anaconda Use Cases

Anaconda's reach clearly extends to many different industries, from healthcare to finance to manufacturing and many more. Read on for details about how Anaconda functions within this multitude of fields.

Neural Networks

With Anaconda's platform, you can build and deploy deep learning models that use neural networks. Anaconda easily integrates with tools like TensorFlow and Keras so you can build and train neural network models, including convolutional neural networks (CNNs) and generative adversarial networks (GANs).

Machine Learning

Scale your machine learning pipeline computations horizontally and vertically on GPUs. Easily store and process data beyond the RAM of a single machine and reduce model training time by as much as 100x. Parallelize algorithms and speed up iteration cycles during the development phase.

Predictive Analytics

In the past, only companies with big budgets could afford the proprietary software needed to leverage predictive analytics for enterprise decision-making. With Anaconda and open-source data science, more businesses have started taking a proactive approach to addressing problems. Whether it involves predicting customer churn, consumer demand levels, stock prices, maintenance needs, or outage probabilities, Anaconda can help operate proactively.

Data Visualization

The Python ecosystem of data visualization tools is vast. With Anaconda, your data science team can find the right visualization tool for any data set, from manufacturing output to seismic activity. They will have the power to build and deploy beautiful dashboards and get them into the hands of decision makers quickly with our one-click deployment technology.

Bias Mitigation

With Anaconda, you can leverage Python's ecosystem of burgeoning open-source tools for mitigating bias in models and in data sets, such as FairLearn and AIF360. Model explainability is essential for running an ethical AI program. Python tools you can use with Anaconda include LIME and InterpretML. These tools help you explain the decisions of black box models as well as create "glassbox" models that are developed to be explainable from the start.

Manufacturing and Automotive Manufacturing

Anaconda OSS packages provide tools that allow manufacturers to analyze, process, and control data so that they can optimize their production, detect anomalies, find inefficiencies, and predict when equipment will fail or require maintenance. Anaconda's platform provides easy access to analysis environments and app deployments so that people throughout the manufacturing organization can work directly with data without having to deal with systems administration or IT hurdles. The combination of Anaconda's packages and Anaconda's platform empowers everyone within the organization to work directly with the data they have to answer the questions that they face.

Financial Services

Anaconda provides a versatile set of OSS tools with many use cases in financial services, including quant/AI/ML/DS research, portfolio management, derivatives pricing, risk modeling, capital planning, regulatory compliance, AML (Anti-Money Laundering), customer analytics, fair lending, targeted marketing, fraud prevention, virtual assistants, and trading strategies. The general pattern is to mix and match best of breed tools to create a unique competitive advantage. Anaconda takes care of enterprise considerations so that you can focus on innovating with a diverse and active ecosystem of tools.
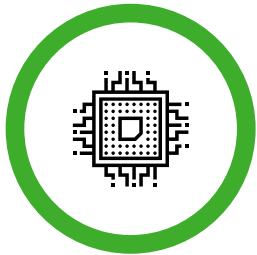
Industry Statistics
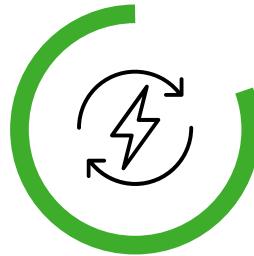
100%
of the top 10
Fortune-ranked
finance companies

90%
of the top 10
Fortune-ranked
retail companies

100%
of the top 10
Fortune-ranked
technology companies

80%
of the top 10
Fortune-ranked
energy companies

100%
of **Ivy League schools**
teach using Anaconda
in their curriculum.

When it comes to programming languages, there are multiple options available. Likewise, when it comes to package and environment managers, there are multiple options available. All of that said, Python has climbed to the top of the programming language heap, and shows no signs of declining. Furthermore, the advantages offered by the open-source community make it the optimal choice over more traditional, proprietary options.

Of course, Python and the open-source ecosystem are not without their flaws: unpredictable speed of development and the potential for an overall lack of cohesion, amongst others. Anaconda is the answer to many of these challenges. Anaconda's tools offer business users security, governance, and stability when it comes to package and environment management. What's more, Anaconda is committed to the betterment of the community it exists within, providing educational resources and a platform for engagement in Nucleus.

Anaconda is the world's most popular data science platform. Our diverse user base views Anaconda as the de facto solution to their data science needs. Anaconda's popularity has led to its widespread adoption within numerous companies and industries. For more information about Anaconda, visit **https://www.anaconda.com/**.