

# Canonical's Data Science Stack

Set up an ML environment with 3 commands on Ubuntu

Data Science Stack (DSS) is an out-of-the-box solution for data science that enables ML environments on your AI workstation. It is fully open source, free to use and native to Ubuntu.

Organisations using DSS can benefit from timely security packages, regression testing on the latest hardware and enterprise support.



## AI is eating the world

Organisations across the globe are looking to identify the right AI use cases to invest resources in. A 2024 [Deloitte report](#) highlights both the vast appetite for AI among enterprises, as well as the major barriers that are standing in the way of adoption.

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40%

of organisations are adopting AI

25%

of organisations are adopting AI

24%

of AI practitioners struggle to access compute resources

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## Why use Data Science Stack?

DSS enables data scientists and ML engineers to get started quickly. The ready-to-use solution simplifies adoption so you can accelerate your AI journey and rapidly explore and validate your machine learning project ideas. What's more, DSS offers a wealth of additional benefits:

### Fully open source

Build on a fully open source solution. Take away the burden of package dependency by getting an out-of-the box tool for your ML environment.

### Hardware agnostic

Get the same experience on your AI workstation, regardless of the GPU that runs underneath. Get optimised frameworks for better performance.

### Unplanned events

Start your initial AI exploration on Ubuntu. Run DSS on Windows with WSL. Easily access compute resources on your operating system of choice.

## Developer tool

Built with AI practitioners in mind, DSS brings together leading open source ML tooling.

## One vendor at all scales

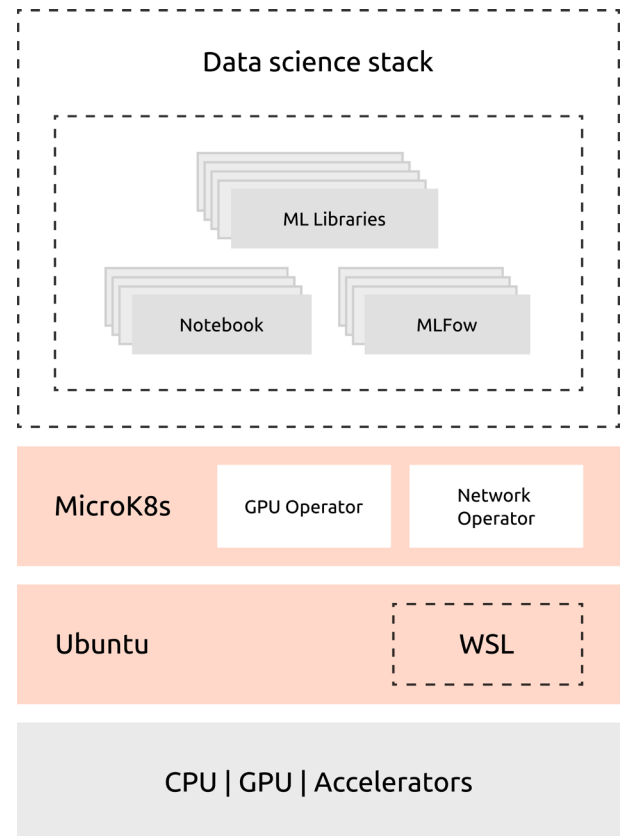
Scale as your projects grow with a single vendor for the entire ML lifecycle, and continue running your ML workloads in a secure environment.

## Enterprise support

Benefit from 24/7 enterprise support for your desktop ML environment with Ubuntu Pro.

## What's inside DSS?

- Quickly install the GPU operator on MicroK8s
- Train your models with Jupyter Notebook
- Accelerate your experimentation with MLflow
- PyTorch and Tensorflow are installed by default. Add any framework of your choice.
- Store your models more easily with MLflow
- Optimise hardware utilisation by accessing tailored libraries such as ITEX and IPEX



## Get your ML environment in 3 commands

Getting an ML environment has never been easier. You only need to run 3 commands - which you can also find in our [tutorial](#) with more information.

1. Install MicroK8s to get a container orchestration, in order to easily expose the GPUs to the workloads.

```
sudo snap install microk8s --channel 1.28/stable --classic
```

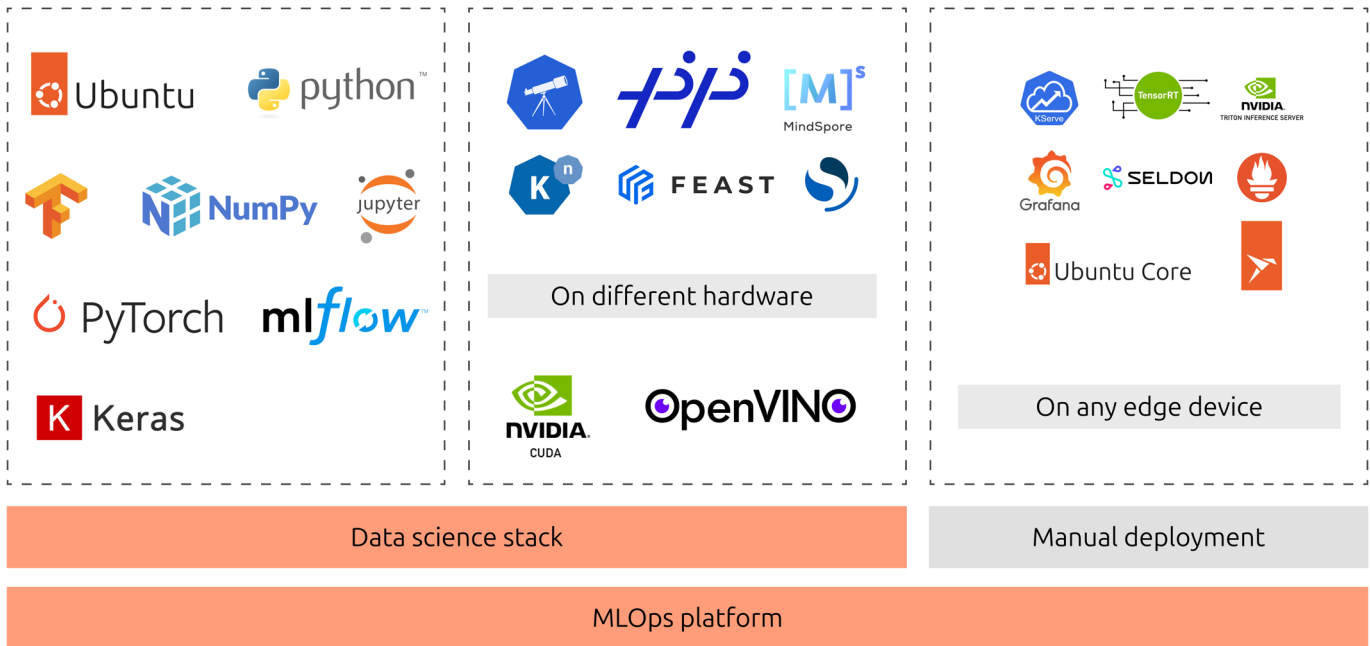
2. Initialise DSS CLI to interact with DSS further.

```
sudo snap install data-science-stack --channel latest/stable
```

### 3. Initialise DSS

```
dss initialize --kubeconfig="$(sudo microk8s config)"
```

## AI workflow



Get Started with DSS today by following our ["Getting Started" tutorial](#).  
Learn More About MLOps by accessing [our guide](#) for in-depth insights.  
For any further inquiries, please [contact us](#) directly.