

The background of the slide features a vibrant, abstract pattern of swirling orange, yellow, and white liquid. It has a textured, marbled appearance with darker, shadowed areas and bright highlights, resembling a close-up of a galaxy or a complex chemical reaction.

Illuminati welcomes you to

PHYSICS WITH PYTHON

It's gonna be a rollercoaster
ride!

Why physics need python?

- Physics and tech are more intertwined than you expect
- Humans are lazy that's why we need python in science

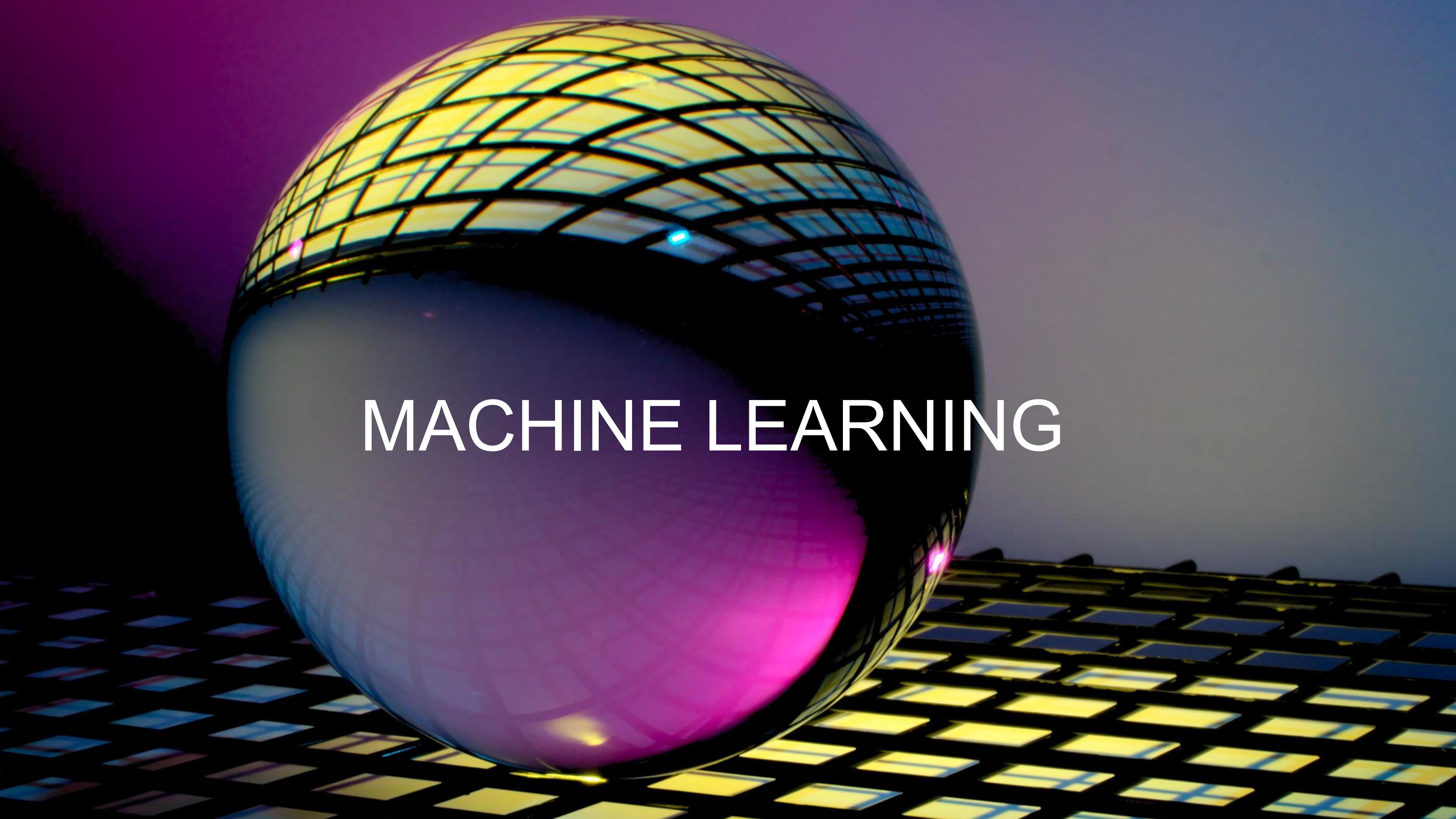
IMPLICATIONS OF PYTHON

Project

- VIEWS
- .git
- ASSETS
 - CSS
 - fonts
 - ico

index.html

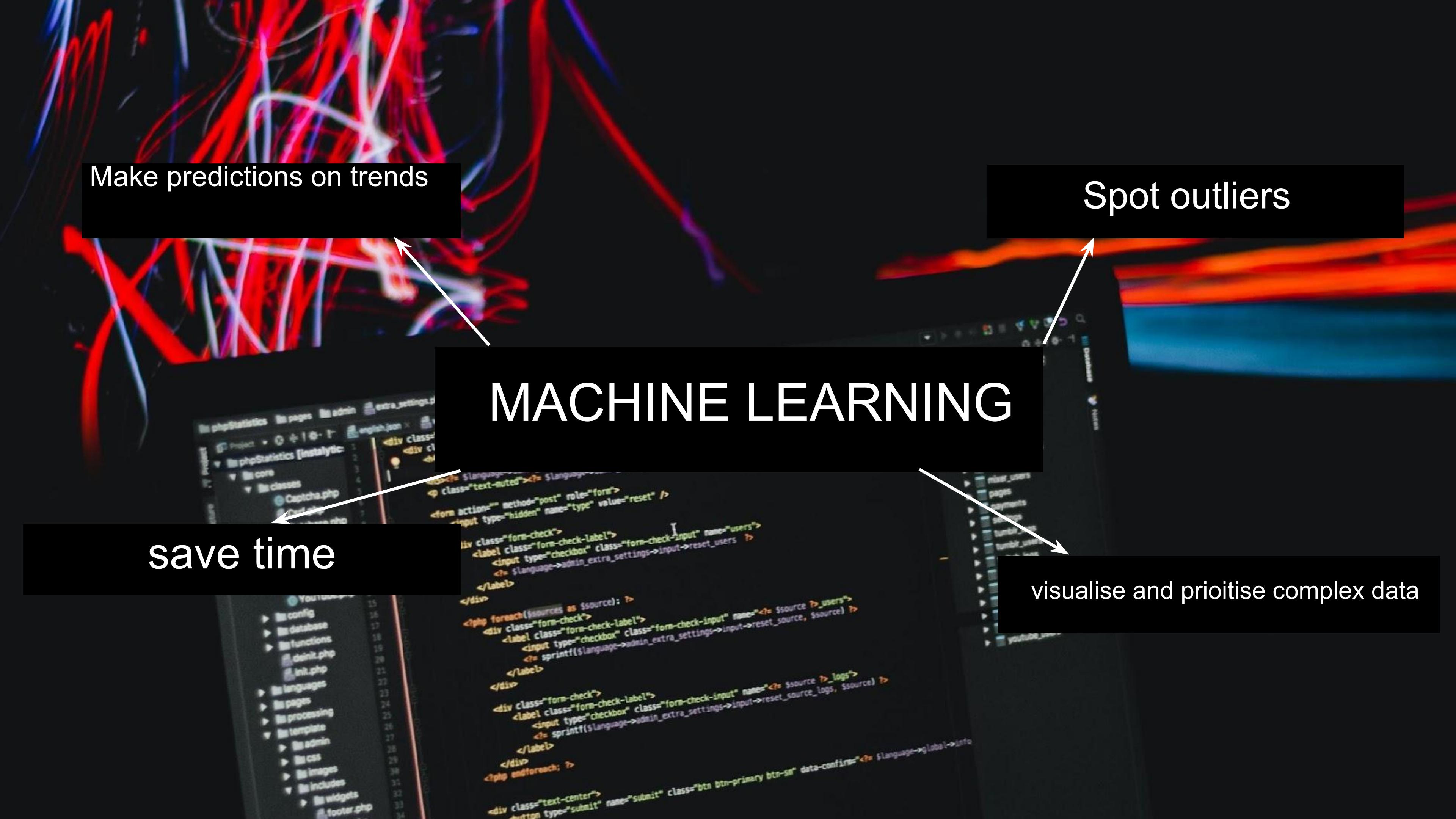
```
48 <script src="https://oss.maxcdn.com/respond/1.4.2/respond.min.js">
```

A large, glowing disco ball with a grid pattern, set against a dark background with a grid floor.

MACHINE LEARNING

WHAT IS MACHINE LEARNING?

Machine learning is a branch of artificial intelligence (AI) and computer science which focuses on the use of data and algorithms to imitate the way that humans learn, gradually improving its accuracy.



Make predictions on trends

Spot outliers

save time

visualise and prioritise complex data

MACHINE LEARNING

```
<div class="text-muted"><?= $language->admin_extra_settings->input->reset_users ></div>
<form action="" method="post" role="form">
<input type="hidden" name="type" value="reset" />
<div class="form-check">
<label class="form-check-label">
<input type="checkbox" class="form-check-input" name="users">
</label>
</div>
<php foreach($sources as $source): >
<div class="form-check">
<label class="form-check-label">
<input type="checkbox" class="form-check-input" name="<?= $source->_users" >
</label>
</div>
<div class="form-check">
<label class="form-check-label">
<input type="checkbox" class="form-check-input" name="<?= $language->admin_extra_settings->input->reset_source, $source >" >
</label>
</div>
<php endforeach; >
<div class="text-center">
<button type="submit" name="submit" class="btn btn-primary btn-sm" data-confirm="<?= $language->global->info" >
```

ARTIFICIAL INTELLIGENCE



WHAT IS ARTIFICIAL INTELLIGENCE?

- Artificial Intelligence(AI) refers to the simulation of human intelligence in machines that are programmed to think like humans and mimic their actions
- The goals of artificial intelligence include computer-enhanced learning, reasoning , and perception.

APPLICATIONS OF AI

DATA ANALYSIS--> process vast amount of data and extract meaningful extracts

THEORETICAL PHYSICS-->algorithms helps explore new theories and simulations

MATERIAL DISCOVERY-->discovery of new materials by AI screening

ASTROPHYSICS--->AI algorithms analyse vast amount of data from astronomical instruments

PARTICLE DETECTION--->Used in particle detectors for distinguishing

PYTHON LIBRARIES INTEGRAL TO PHYSICS

Data processing and cleaning: Python libraries such as NumPy and Pandas provide tools for processing, cleaning, and preparing large datasets generated by physics experiments

Statistical analysis: Python libraries such as SciPy and Statsmodels provide tools for statistical analysis, including hypothesis testing, regression analysis, and Bayesian inference

Machine learning: Python libraries such as scikit-learn, TensorFlow, and PyTorch provide powerful tools for machine learning

Model fitting: SciPy, a Python library for scientific computing, includes optimization algorithms that can be used to fit models to data

Data visualization: Popular Python libraries for data visualization include Matplotlib and Seaborn