Empowering Geoscientists

Python Tool Pro's (Prizm) role in unlocking new subsurface workflows and enhancing existing ones

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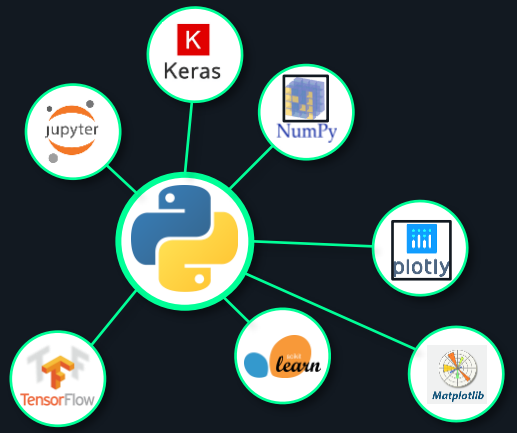
Cegal Python Tool Pro (Prizm)

Domain Data

Python Tool Pro



Python Ecosystem

Legacy data

Application silo

Distributed data sources

Easy to connect to domain data

Enrichment and contextualisation

Secure modular components

Insight and value

Advanced data science

Machine learning and AI

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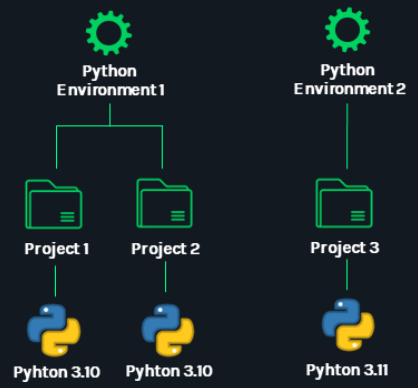
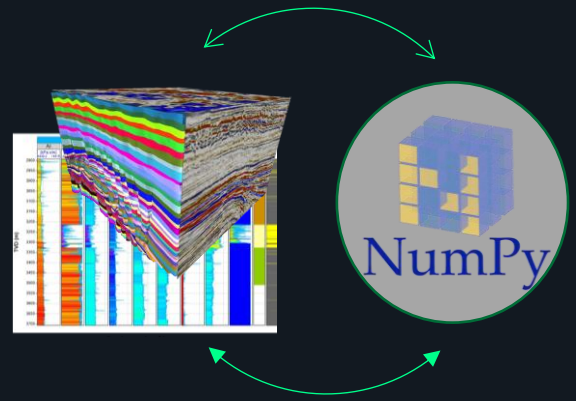
Challenges

Python and Python Environments



Data Export

Data Conversion



Data Import

Collaboration and Usability

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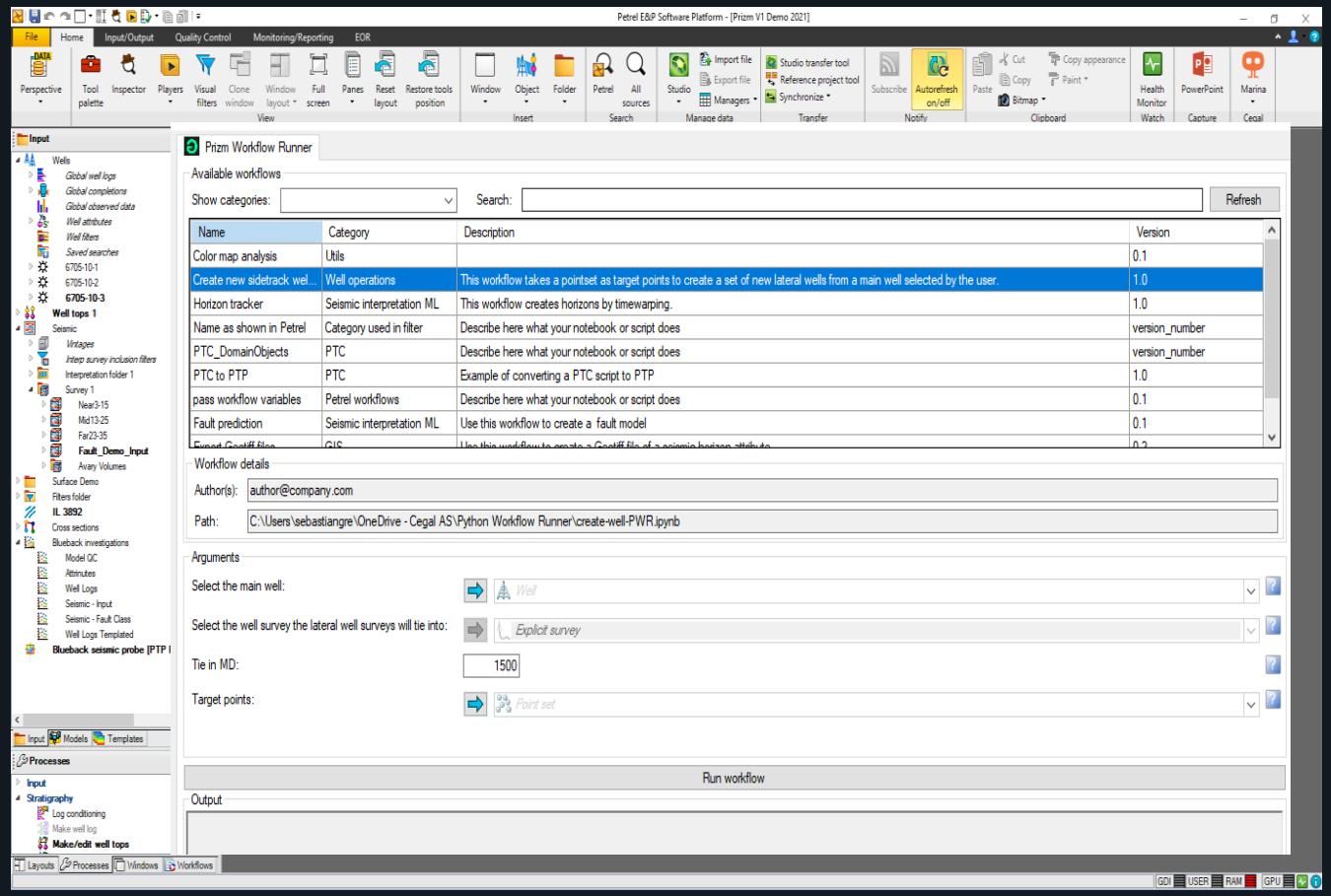
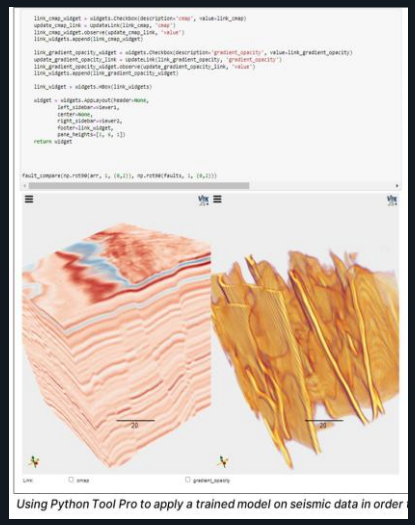
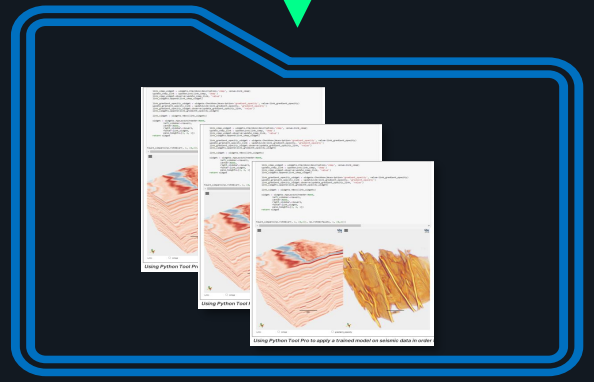
Petrel user

Python user





Using Python Tool Pro to apply a trained model on seismic data in order



Workflow repository

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Train your own model inside Petrel
Vs log prediction

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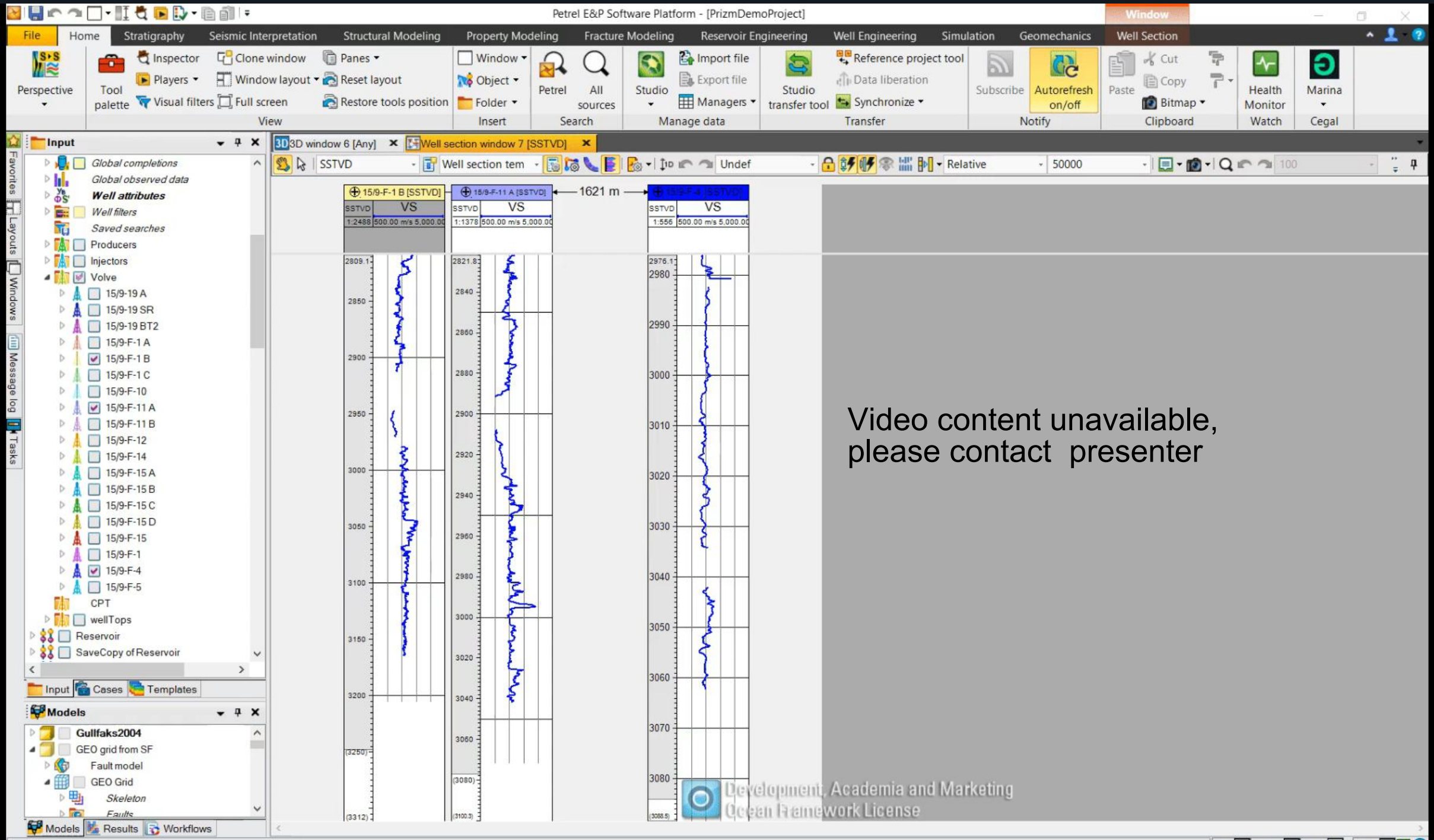
Petrel E&P Software Platform - [PrizmDemoProject]
Window
File
Home
Stratigraphy
Seismic Interpretation
Structural Modeling
Property Modeling
Fracture Modeling
Reservoir Engineering
Well Engineering
Simulation
Geomechanics
Well Section
Perspective
Tool palette
Inspector
Players
Visual filters
Clone window
Window layout
Full screen
Panes
Reset layout
Restore tools position
View
Window
Object
Folder
Insert
Petrel
All sources
Search
Studio
Import file
Export file
Managers
Manage data
Studio transfer tool
Reference project tool
Data liberation
Synchronize
Transfer
Subscribe
Autorefresh on/off
Notify
Paste
Cut
Copy
Bitmap
Clipboard
Health Monitor
Watch
Marina
Cegal
Input
Global completions
Global observed data
Well attributes
Well filters
Saved searches
Producers
Injectors
Volve
15/9-19 A
15/9-19 SR
15/9-19 BT2
15/9-F-1 A
15/9-F-1 B
15/9-F-1 C
15/9-F-10
15/9-F-11 A
15/9-F-11 B
15/9-F-12
15/9-F-14
15/9-F-15 A
15/9-F-15 B
15/9-F-15 C
15/9-F-15 D
15/9-F-15
15/9-F-1
15/9-F-4
15/9-F-5
CPT
wellTops
Reservoir
SaveCopy of Reservoir
Input
Cases
Templates
Models
Gullfaks2004
GEO grid from SF
Fault model
GEO Grid
Skeleton
Faults
Models
Results
Workflows
3D window 6 [Any]
Well section window 7 [SSTVD]
SSTVD
Well section tem
Undef
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100
15/9-F-1 B [SSTVD]
15/9-F-11 A [SSTVD]
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1:1378
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1:556
500.00 m/s 5,000.00
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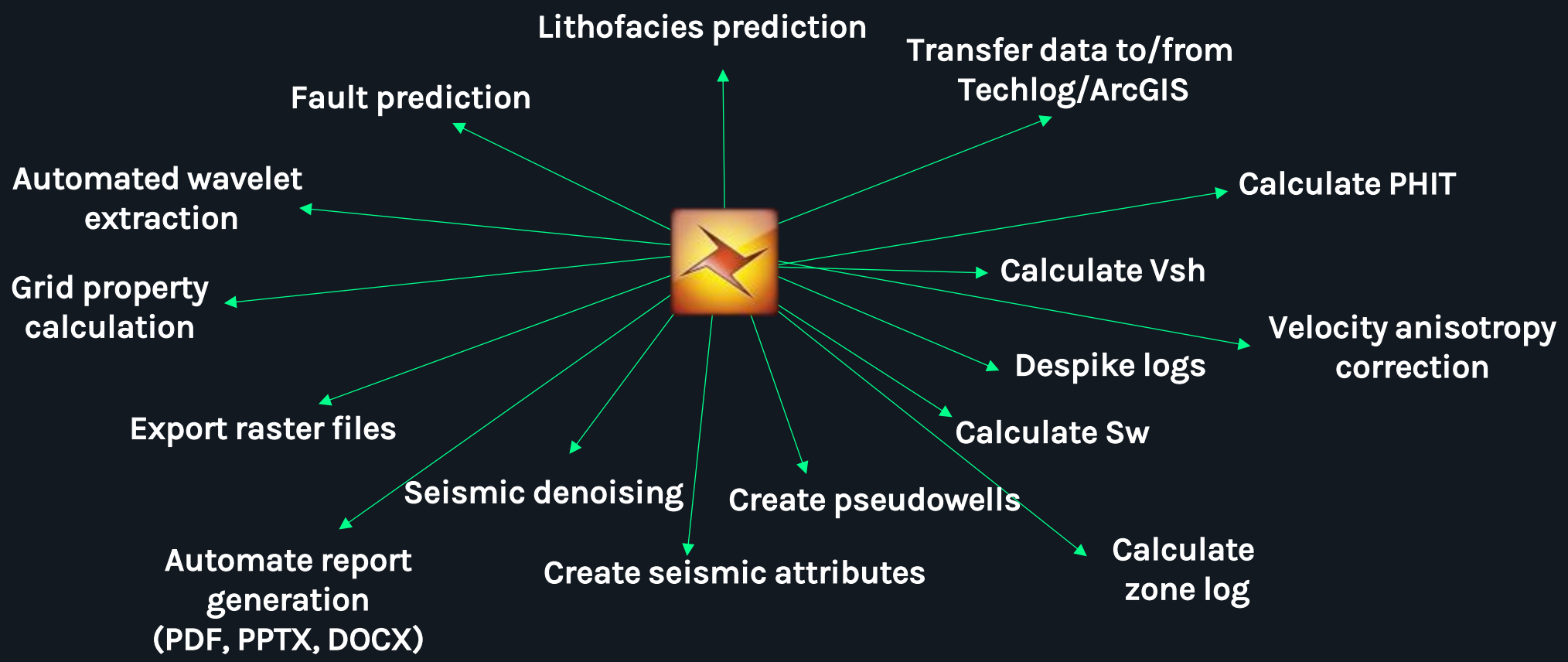
GPU

Create your own Petrel plugin



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Take aways

Python Tool Pro

- Empowers geoscientists to deploy and use machine learning models written in Python directly in Petrel.
- Enables programmatic access to Petrel projects, opening the doors to systematic data mining and remediation.
- Eliminates the need for geoscientists to interact with Python code.
- Allows Petrel's functionality to be extended and creates custom Python-based Petrel plugins for new or automated workflows.
- Extends Petrel’s reach to other data sources.

Prizm docs

docs.prizm.cegal-geo.com

SeismicCube

class cegalprizm.pythontool.SeismicCube(*petrel_object_link*

A class holding information about a seismic cube

Seismic files of format SEG-Y are always read-only.

Functions

__init__(petrel_object_link)	
all()	Creates a cegalprizm.p values for the entire cul
annotation(i, j[, k])	The annotations for sei
annotation_indices(inline, crossline[, ...])	The i,j and k index of a /samplenumber
chunk(irange, jrange, krange)	Creates a cegalprizm.p values for the specified
clone(name_of_clone[, copy_values])	Creates a clone of the P
column(i, j)	Creates a cegalprizm.p values for the specified
columns([irange, jrange])	The columns in given i-
has_same_parent(other)	Tests whether the seism collection
ijks_to_positions(indices)	EXPERIMENTAL METHO indices to xyz.
indices(x, y, z)	The indices of a node n
layer(k)	Creates a cegalprizm.p values for the specified