

AI/ML Intelligent Scheduling for HPC

CUG 2025

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ALTAIR ONE

ALTAIR HYPERWORKS

ALTAIR RAPIDMINER

ALTAIR HPCWORKS

Data Science + Rocket Science™

Safe Harbor Statement

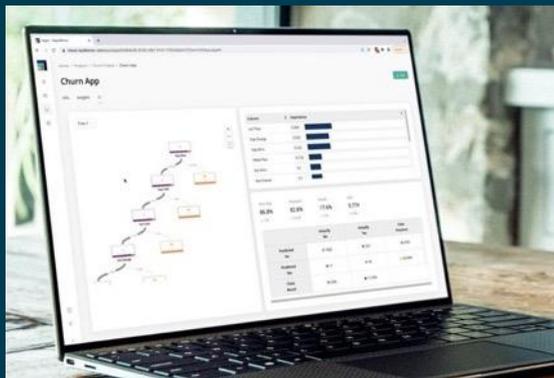
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We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements. Forward-looking statements involve known and unknown risks, uncertainties, assumptions and other factors that may cause our actual results, performance, achievements or expectations to be materially different from any future results, performance, achievements or expectations expressed or implied by the forward-looking statements. Except as required by law, we assume no obligation to update these forward-looking statements publicly, or to update the reasons why actual results could differ materially from those anticipated in the forward-looking statements, even if new information becomes available in the future.

Altair Knows AI

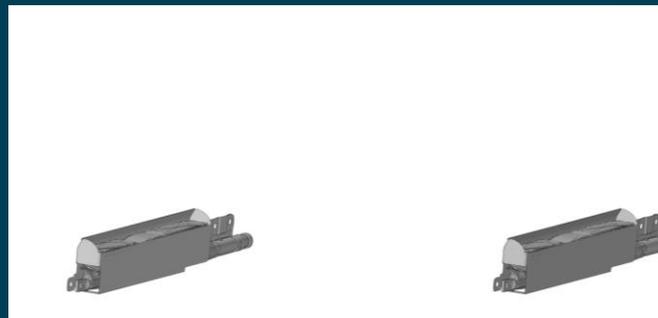
Altair RapidMiner®

- Cloud-native, enterprise AI fabric
- Enables all skill levels: no-code to expert
- AI agents, knowledge graphs, LLMs, native SAS, Python, R, and data prep & extraction



Altair Physics AI™

- Geometric deep learning engine
- Learns directly on 3D meshes
- Trains with existing simulation data



Airbag Design: **2 hours** → **30 secs**

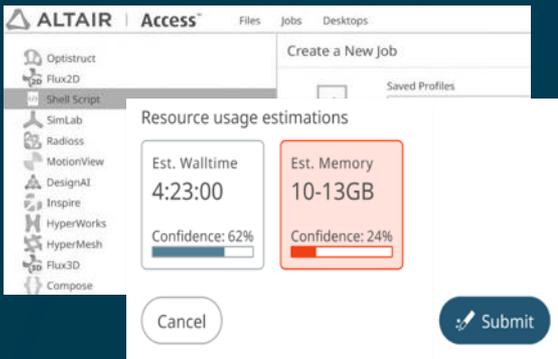
Altair HPCWorks®

AI Assistant

Estimates mem and walltime

Trains on your data (inc. input file mining); auto-retraining

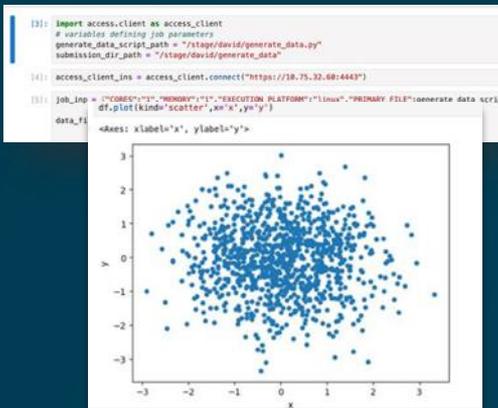
+10-15% throughput



Notebooks

Easily launch Jupyter books

Leverage Lab API within notebooks to run on HPC

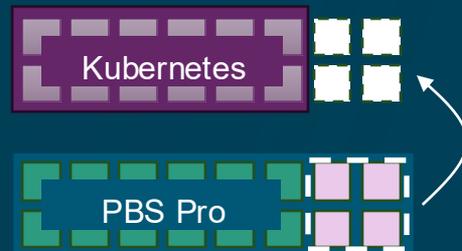


Mix HPC+AI Workloads

Share nodes based on demand and policy (PBS Pro – K8s)

Dynamic autoscaling

Zero client changes required



Intelligent Scheduling → Throughput, Turnaround, Utilization

Measure with **InsightPro™**
mem, cores, runtime, lics, ...

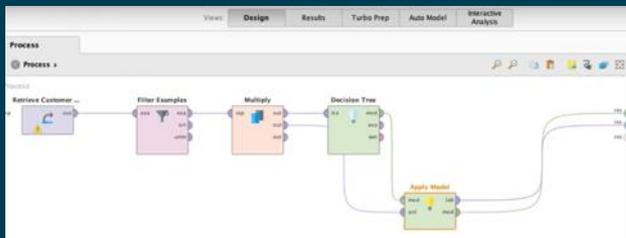


Peak Usage

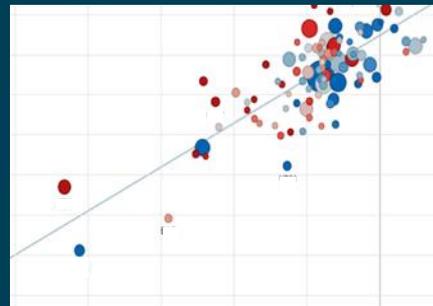
Day\Hour	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Sun	18	35	12	12	12	15	13	10	10	15	15	21	22	22	22	22	22	22	22	22	22	22	22	18
Mon	18	21	35	34	36	40	42	40	36	49	42	45	72	52	87	86	100	100	100	88	77	72	51	50
Tue	43	45	44	44	44	44	39	43	43	49	60	69	83	86	95	95	96	100	91	80	72	55	41	52
Wed	30	48	48	49	47	49	44	46	43	58	62	74	75	83	94	93	94	97	94	83	74	70	48	65
Thu	39	59	57	51	45	45	42	40	39	54	63	69	74	83	87	92	96	104	104	96	87	76	69	61
Fri	57	55	53	52	43	40	41	41	41	36	66	67	73	76	84	87	92	98	91	72	68	56	43	35
Sat	51	40	35	33	31	27	22	19	18	19	20	22	25	26	27	22	22	25	24	24	21	12	14	17

Legend: 0 100 DataPoints: 7,539

Model/predict with **RapidMiner®**



Automatically use improved requests in **HPCWorks®**



Get the **right resources**
to the **right person** (agent)
at the **right cost**
and at the **right moment.**

Powered by Altair® HPCWorks® and Altair® RapidMiner®