DATALIZATION FOR ALL
« AI » in Drug Discovery

IT's About Tech– 24.09.2024

Our Story and Motto

Datalization for all

LUCID ANALYTICS - OUR MISSION

To empower Datalization through scientific and human intelligence.

Datalization (n,f) is the use of Data & Algorithms to expand the business and optimize or provide new revenue streams; it is the process of moving to a data driven organisation.
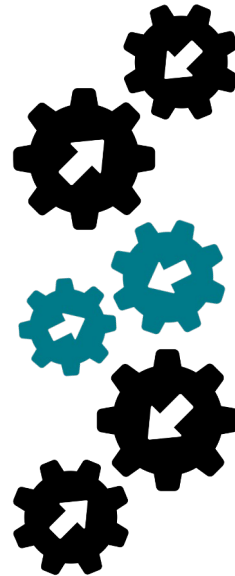
OPTIMAL **SYNERGY** OF TWO FIELDS

Science

IT
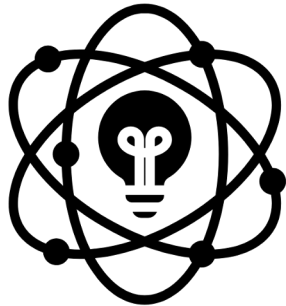
Scientific input into R&D projects in order to ensure and validate the quality of developed and deployed data model

Development and implementation of data solutions with an expert software development team born in a scientific environment

Ensuring this thanks to our internal core expert team and our expert Lucid network

Developing a solution is a point. Understanding the scientific need is another, this is why our Software development team is Science-born!

"AI" for Drug Discovery
...Or Open Data for Open Science?

Open Source Empowering Science

- Avogadro: Open-source molecular editor for chemistry and drug discovery.

- TensorFlow and PyTorch: Machine learning libraries for scientific research.

- Astropy: Python library for astronomy research and data analysis.

- Open Science Grid: Open-source platform providing distributed computing resources for data-intensive research.

- GNU Octave: Open-source alternative to MATLAB, used for numerical simulations in science and engineering.

- OpenMM: Open-source toolkit for molecular simulations, especially in computational biology.

- GeoNode: Open-source platform for sharing geospatial data and maps, widely used in environmental and climate sciences.

STANDARDIZE *study metadata across multiple laboratories*

REQUIREMENT

Build a platform to support prospective study metadata acquisition, assisting different Omics laboratories to register studies / dataset in a central place via flexible data models facilitating analysis and following FAIR principles.

SERVICES PROVIDED

- Help Omics labs to register study metadata.
- FAIR-ification of studies and datasets (historical and prospective).
- Automation of analysis pipelines.
- Empower data analysists with programmatic access to data.
- Enable data reuse.

DELIVERABLES & BENEFITS

Web platform enabling study registration, searching and analysis.
FAIR-ification of historical studies as well as prospective registration.
Samples registration system.
Integration with existing services.

F Findable   **A** Accessible   **I** Interoperable   **R** Reusable

MASTER *results interpretation via NLP and LLM methods*

REQUIREMENT

Generate a digital solution to level up the interpretation of gene expression signature analysis.
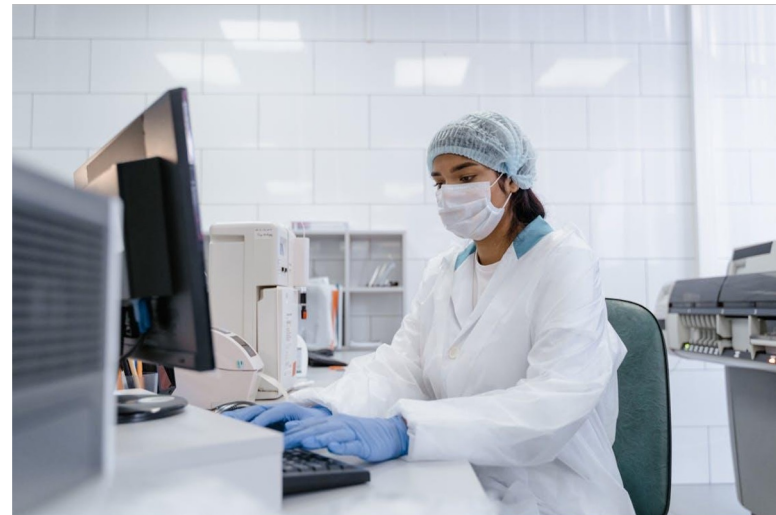Create a gene expression signature annotation pipeline to simplify and aggregate multiple genesets together using NLP and LLM algorithms in order to create a new set of biological themes helping researchers to get a clear and efficient results interpretation.

SERVICES PROVIDED

- Easy-to-use Rshiny interface.
- Connexion to database of master expression programs via internal API.
- Calculation of a score for master expression programs.
- Comprehensive visualization of differential expression analysis results.

DELIVERABLES & BENEFITS

NLP and LLM algorithms.
Developer documentation.
User documentation.
Rshiny web interface.
Interactive graphical visualizations.

SWISS DIGITAL HEALTH
Startup Map October 2021

www.health-trends.ch

#189

Market Information & Advisory Portal #13
Patient-HCP Collaboration #18
Data-driven Insights #37
Chronic Care #22
Quantified Self (Tracking & Monitoring) #30
Others #29
HCP Decision Support #40

Download: www.health-trends.ch

Missing a startup or want to give feedback? Send us a message to: info@health-trends.ch

THANK YOU !

f.cozzolino@lucid-analytics.ai / o.schwartz@lucid-analytics.ai
+41 78 249 99 40