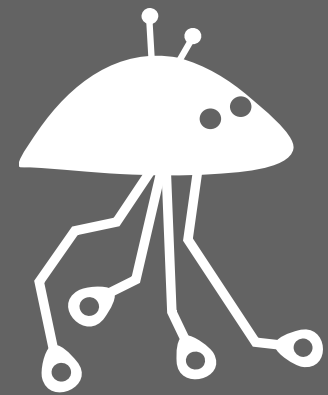


2027

PFE BOOK



OLINDIAS

Biotech

Bioinformatics

FinTech

RegTech

Cybersecurity

Climate

Growth

📍 Monastir, Tunisia



Outline

1 About Us

2 Our Values

3 Internship Subjects

4 Expertise

About Us

Olindias is a global AI innovation company that delivers smart AI features and solutions that enhance product performance, improve user experience, and accelerate digital growth.

Vision :

We believe technology should empower people. Our vision is to create practical, human-centred AI that helps companies innovate with confidence and make a positive impact.

Expertise :

Olindias provides flexible AI search, recommendation, and Natural Matchmaking technologies that integrate seamlessly into any SaaS.



OLINDIAS

Our Values

We believe in the transformative power of technology and we're dedicated to:



1. Innovation

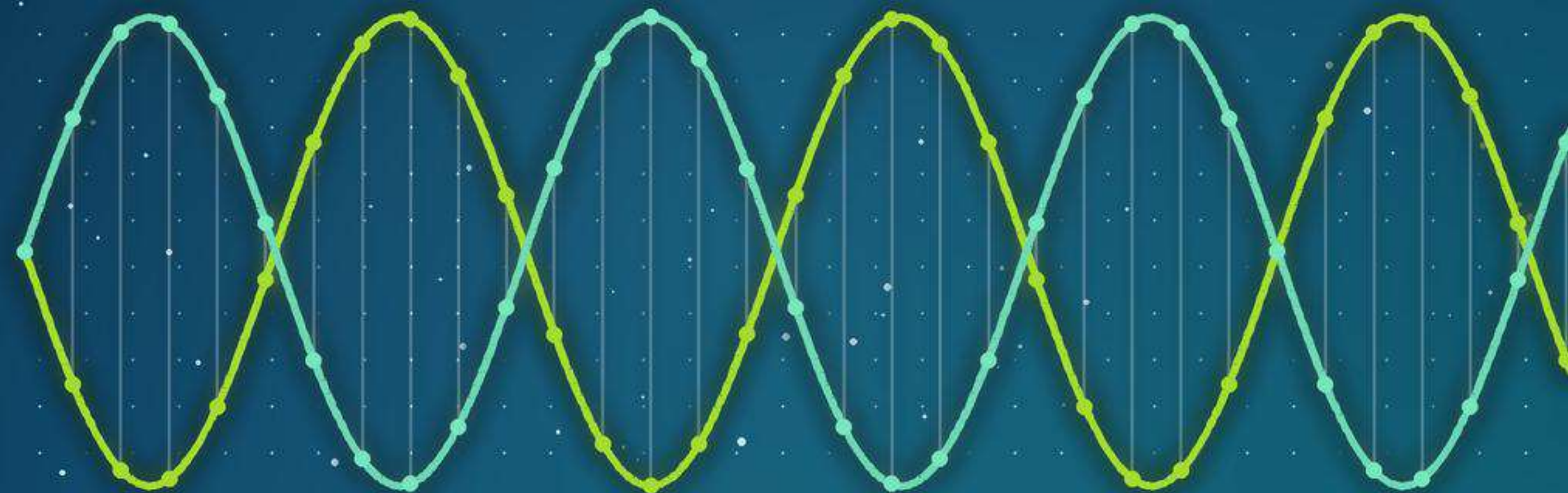
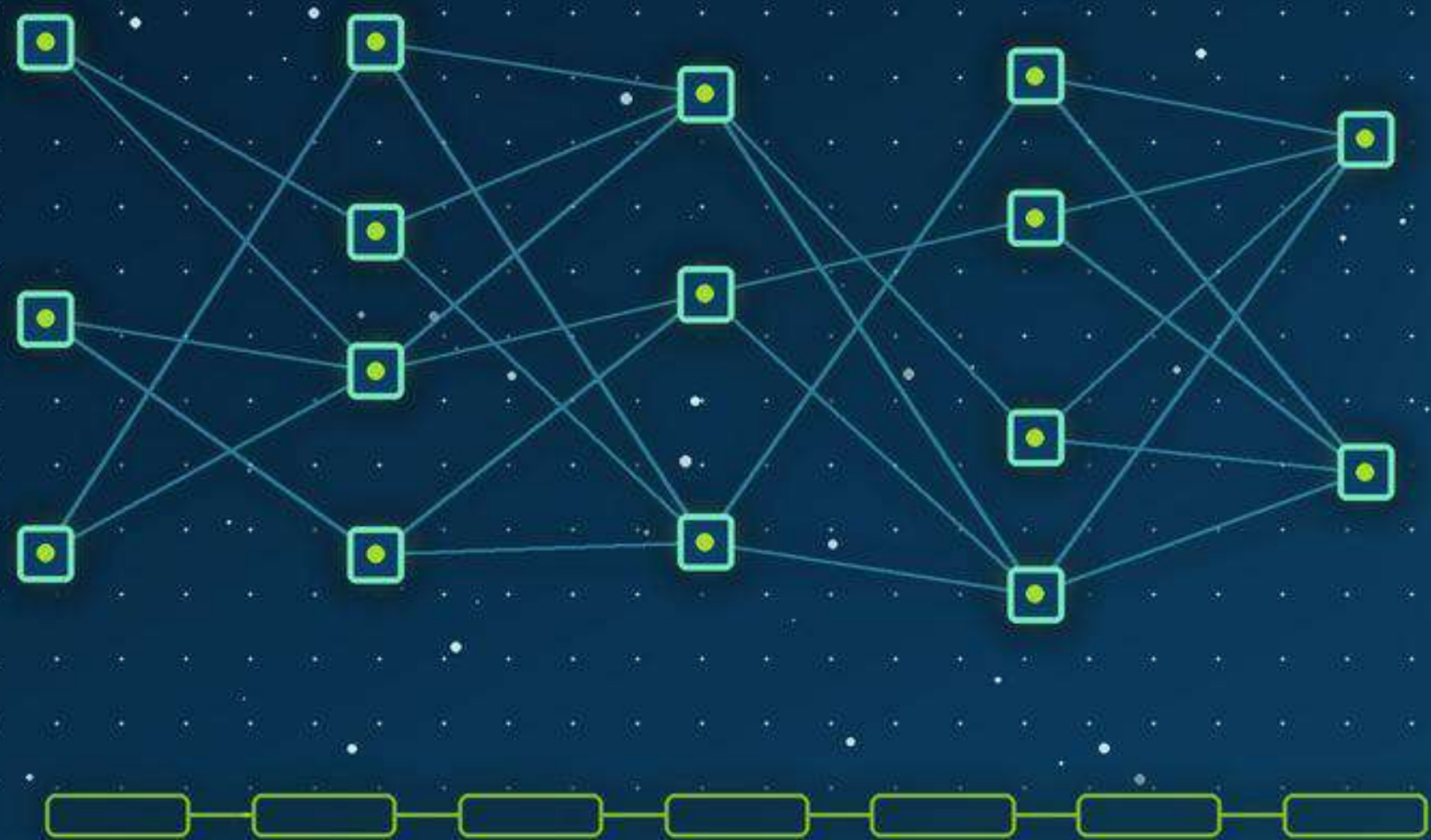
Empowering people and businesses to grow together.

2. Credibility

Strengthening trust within the startup ecosystem.

3. Impact

Building a SPAM-FREE digital future together!



Subject 1 : Design and Implementation of an Agentic SaaS Platform with Data Provenance for Generative Bio-Design

PFE-01

Biotech

AI Engineering

Cloud SaaS

Generative Bio-Design

Build the cloud platform around a generative protein-design engine: reliable long-running jobs, and a tamper-evident record of every decision.

What you'll build

- 1 Agentic orchestrator**
Async job queues, retries and fallbacks
- 2 Provenance engine**
Hash-chained lineage of every prompt, mutation and score
- 3 Enterprise console**
Pareto plots and interactive 3D molecule viewer
- 4 Screening & DevOps**
Governance hook, Docker, open integration APIs

KEY CHALLENGE

Keep the audit trail consistent when jobs are retried, cancelled or partially fail.

TARGET

Rebuild any candidate's full decision path in under 1 s over 10,000+ logged events.

TECH STACK

Python

FastAPI

Celery

Redis

PostgreSQL

LangGraph

NetworkX

Next.js

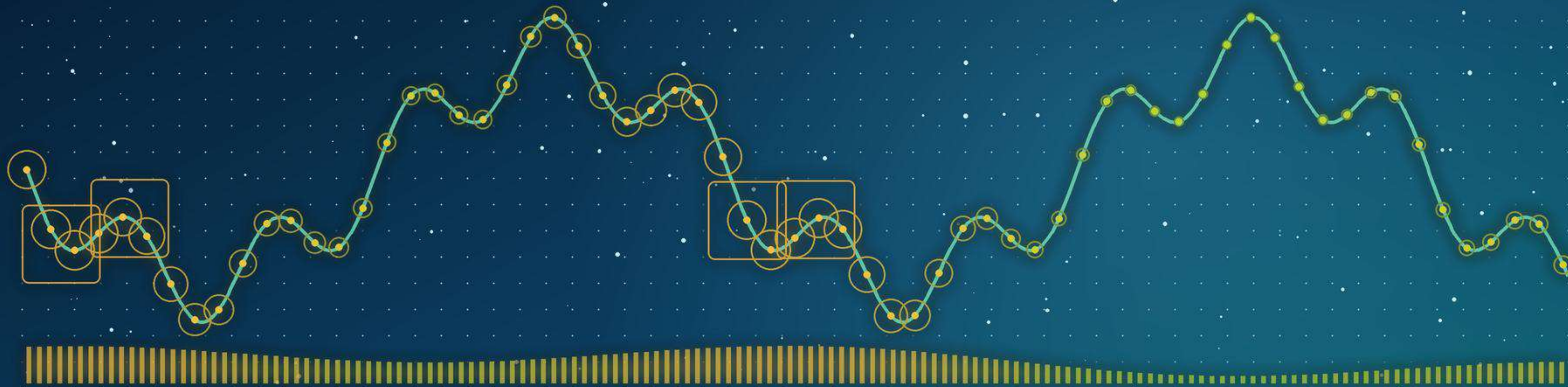
3Dmol.js

Docker

Profile Software / AI engineering

Format 1 intern · 4 to 6 months

Market Global biotech R&D



Subject 2 : Uncertainty Quantification and Targeted Molecular Simulation for Generative Protein Engineering

PFE-02

Biotech

Machine Learning

Computational Biology

Scientific Computing

Measure where a protein model is truly unsure, and spend expensive physics simulation only there.

What you'll build

- 1 Uncertainty estimator**
Bayesian Monte Carlo ensembles over ESM-2
- 2 Targeted simulation**
OpenMM / PyRosetta on risky regions, ΔG readout
- 3 Screening module**
Check against regulated-sequence registries
- 4 Retrospective benchmark**
ProteinGym: would it have caught known failures?

KEY CHALLENGE

Separate what the model does not know from genuine biological variation.

TARGET

At least 40% less simulation compute at equal or better ranking quality.

TECH STACK

Python

PyTorch

Transformers

ESM-2

OpenMM

PyRosetta

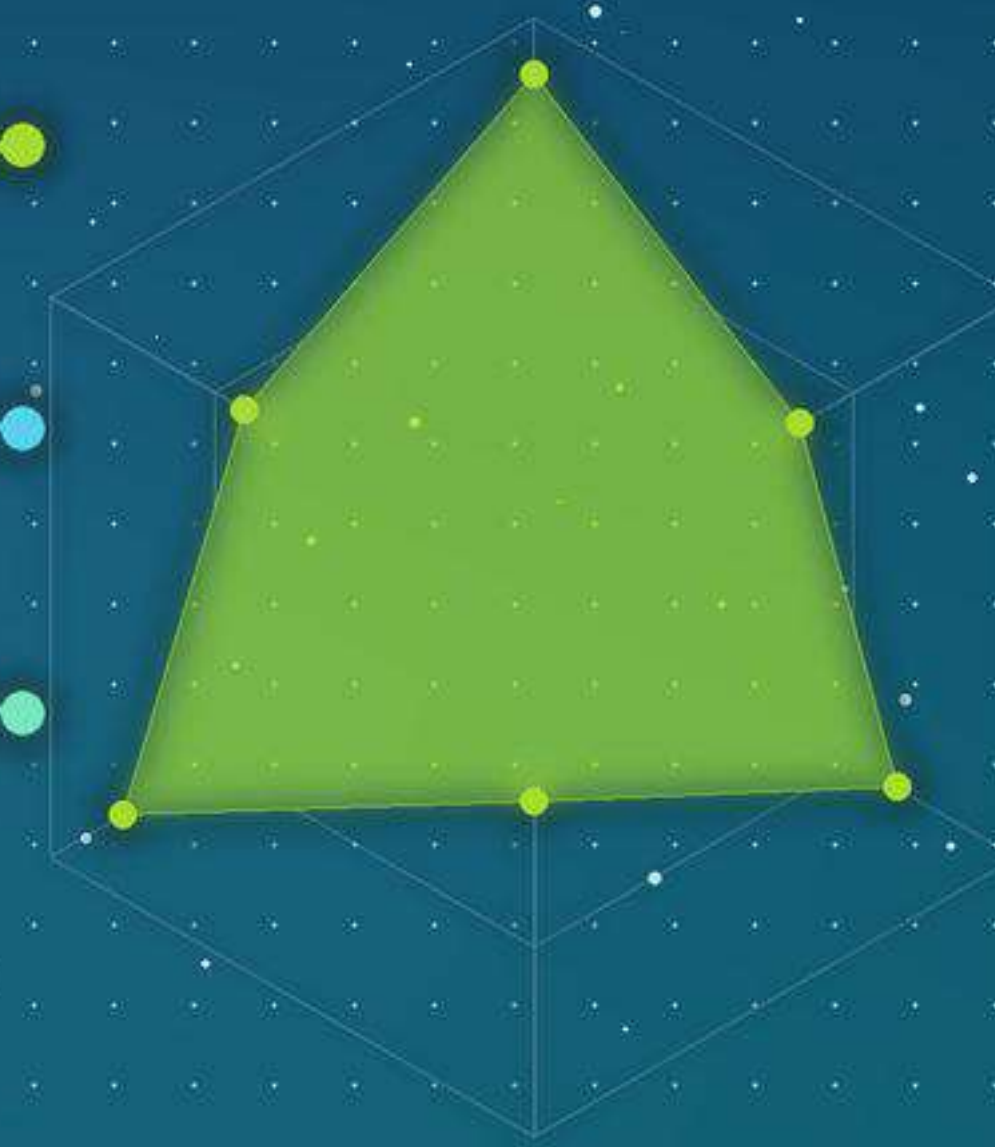
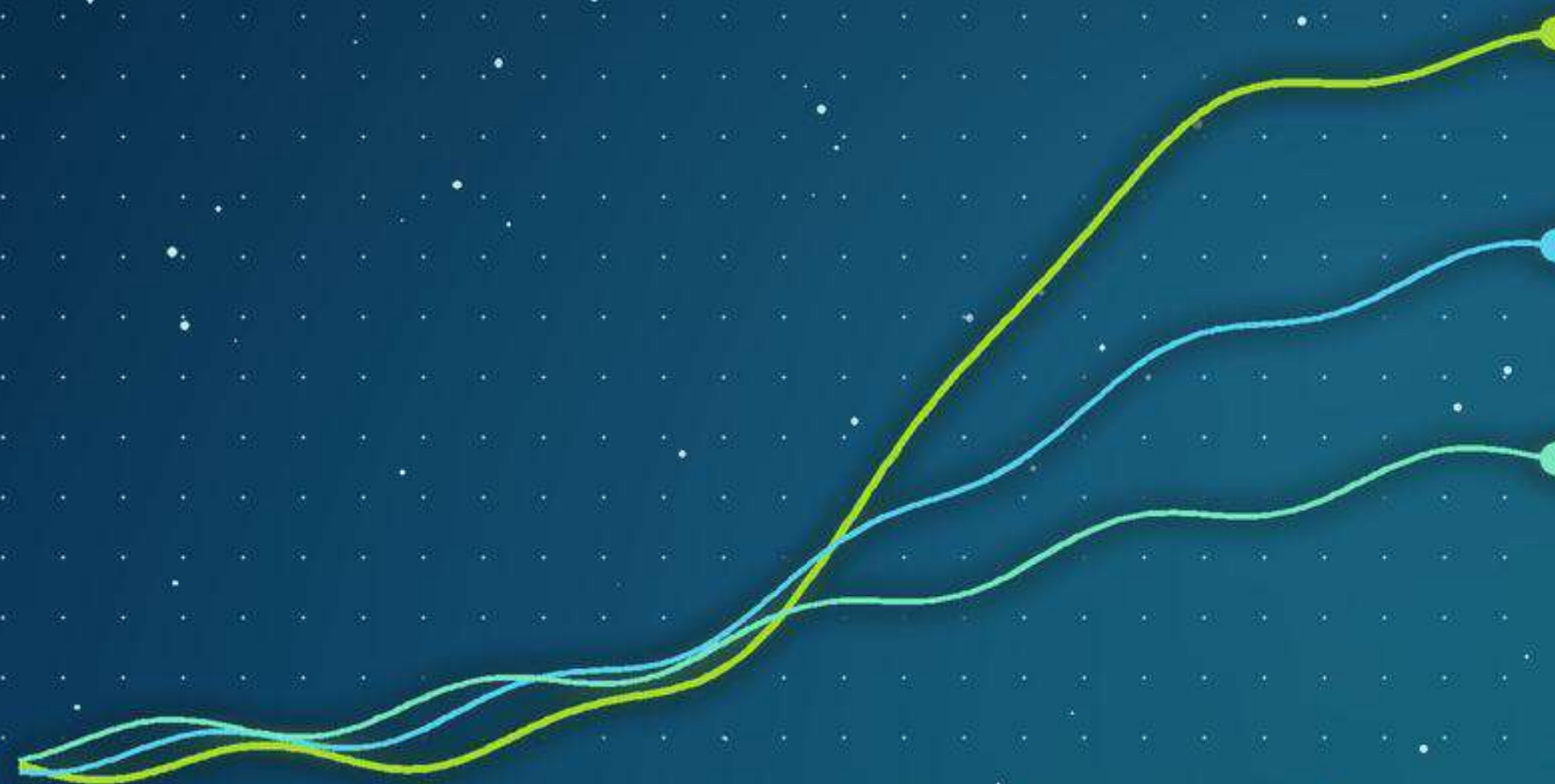
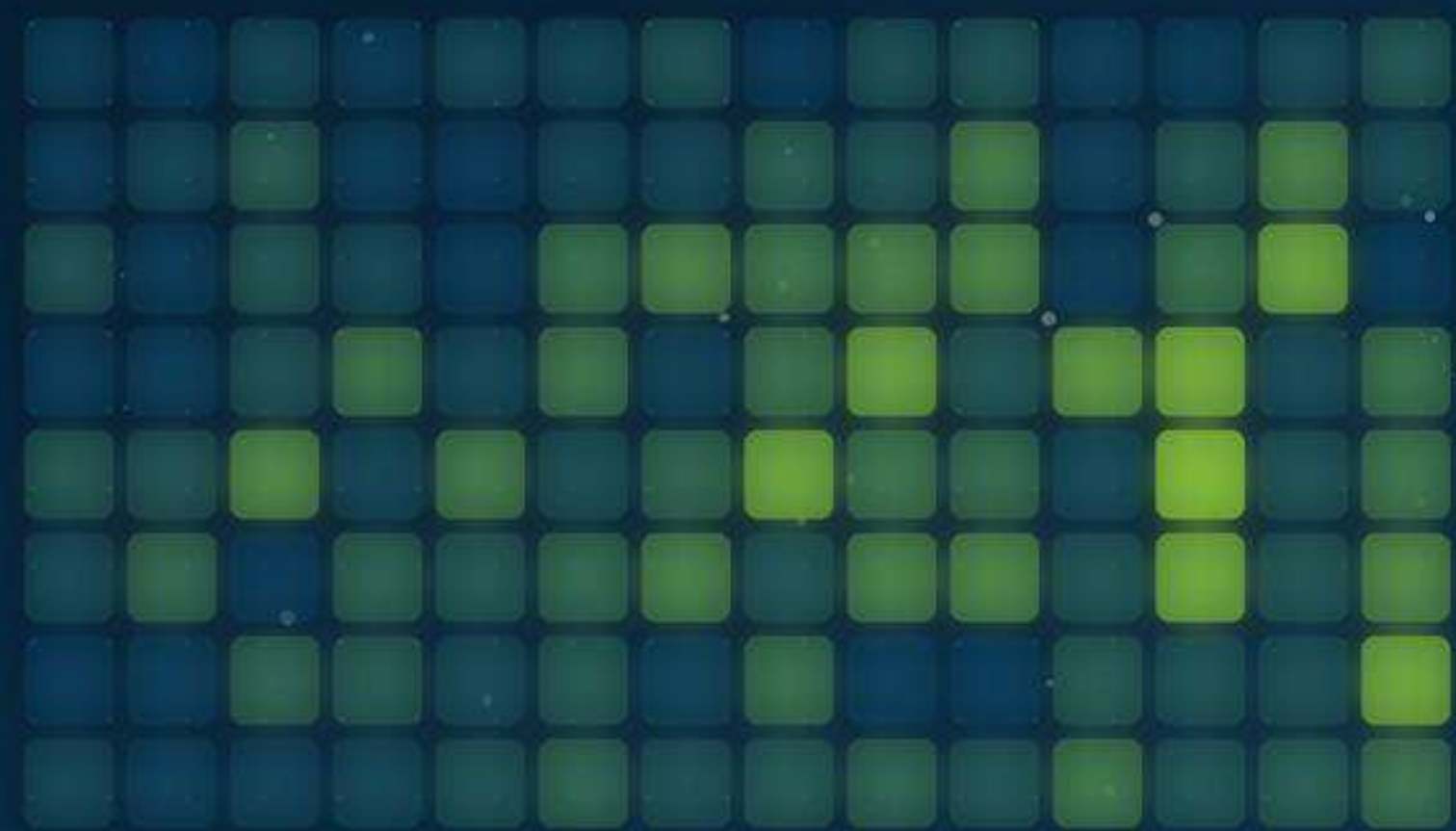
Biopython

SciPy

Profile Biotech engineer or master

Format 1 intern · 4 to 6 months

Market Global



Subject 3 : VenturePulse AI: An Agentic Platform for Predictive Market Shift Forecasting in Deep Tech

PFE-03

Finance

AI Engineering

Data Science

Venture Intelligence

Spot which deep-tech sectors are about to move from early public signals, before the databases catch up.

What you'll build

- 1 Market shift engine**
arXiv, GitHub, patent and funding feeds
- 2 Momentum scoring**
Explainable, tunable score per sector
- 3 Historical backtest**
Did the signals predict past breakouts?
- 4 Dashboard & briefings**
Heatmaps, sector radar, cited reports

KEY CHALLENGE

Zero lookahead bias: strict point-in-time data from week one.

TARGET

Beat a funding-volume baseline on precision and recall in the backtest.

TECH STACK

Python

PyTorch

LangGraph

FastAPI

PostgreSQL

Pandas

Scikit-learn

Next.js

D3.js

Profile AI engineering / data science

Format 1 intern · 4 to 6 months

Market Global · deep tech



Subject 4 : Automated Document Intelligence and Trade Risk Engine for SME Cross-Border Finance

PFE-04

Finance

AI & NLP

Islamic FinTech

RegTech

Turn SME financial PDFs into ratios, a credit score and a traceable Shariah compliance verdict, in seconds.

What you'll build

- 1 Document intelligence**
LayoutLM + OCR: from PDF to clean JSON
- 2 Shariah rule engine**
Traceable verdicts against a declared standard
- 3 Credit risk model**
XGBoost / LightGBM default-risk score
- 4 API & dashboard**
FastAPI service with upload, review, export

KEY CHALLENGE

No silent misreads: confidence scoring and human-review routing.

TARGET

Extraction accuracy, Shariah agreement and AUC vs. a ratio-only baseline.

TECH STACK

Python

LayoutLM

PDFPlumber

XGBoost

LightGBM

FastAPI

Streamlit

Docker

Profile CS / data science (MSc, Eng.)

Format 1 intern · 4 to 6 months

Market Malaysia → Gulf & SE Asia



Subject 5 : BioKey-ZK: Zero-Knowledge Biometric Key Generation and Fine-Grained Identity Verification Using Standard RGB Cameras

PFE-05

Security

Computer Vision

Applied Cryptography

Cybersecurity

Log in with your face without any server storing it: the key is derived on the device and proven with zero knowledge.

What you'll build

- 1 Twin-grade recognition**
ArcFace / ViT on fine facial regions
- 2 Key derivation**
Fuzzy extractor + device-held second factor
- 3 Zero-knowledge proof**
zk-SNARK: no image or key leaves the device
- 4 Security evaluation**
Reconstruction and poisoning attack tests

KEY CHALLENGE

A face alone lacks entropy, so it is bound to a device secret.

TARGET

At least 92% accuracy on identical twins, with FAR/FRR vs. an ArcFace baseline.

TECH STACK

PyTorch

OpenCV

ArcFace

ViT

Circom

SnarkJS

PyCryptodome

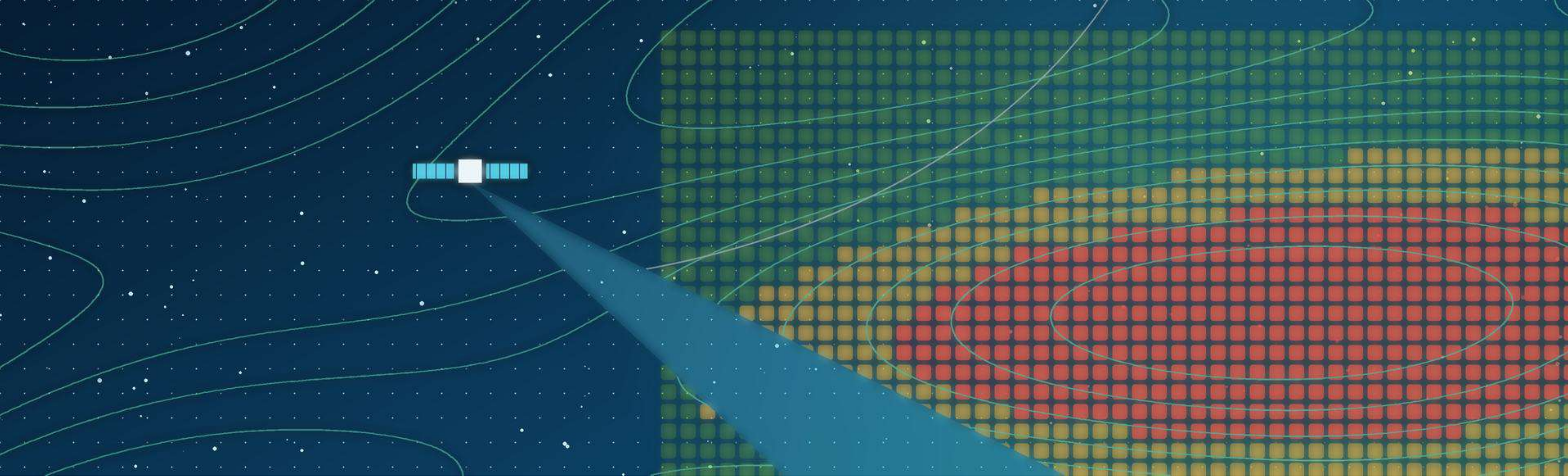
FastAPI

React Native

Profile CS / cybersecurity / AI

Format 1 intern · 4 to 6 months

Market Global · finance & health



Subject 6 : GeoAI and Satellite Fusion for Early Peatland Wildfire Prediction and Carbon Loss Monitoring

PFE-06

Climate

GeoAI

Remote Sensing

Climate Tech

Predict underground peat fires days before they reach the surface, using satellite radar and soil moisture.

What you'll build

- 1 Satellite pipeline**
Sentinel-1/2, CHIRPS and moisture indices
- 2 Groundwater model**
Peat water-table depth from radar
- 3 Risk prediction**
Daily fire-risk score on 1 km grids
- 4 Dashboard & alerts**
Live risk heat map, threshold alerts

KEY CHALLENGE

Isolate the groundwater signal from vegetation and surface roughness.

TARGET

Days of advance warning before real fires, at a stated false-alarm rate.

TECH STACK

Python

Earth Engine

Copernicus

XGBoost

PyTorch

Rasterio

Geopandas

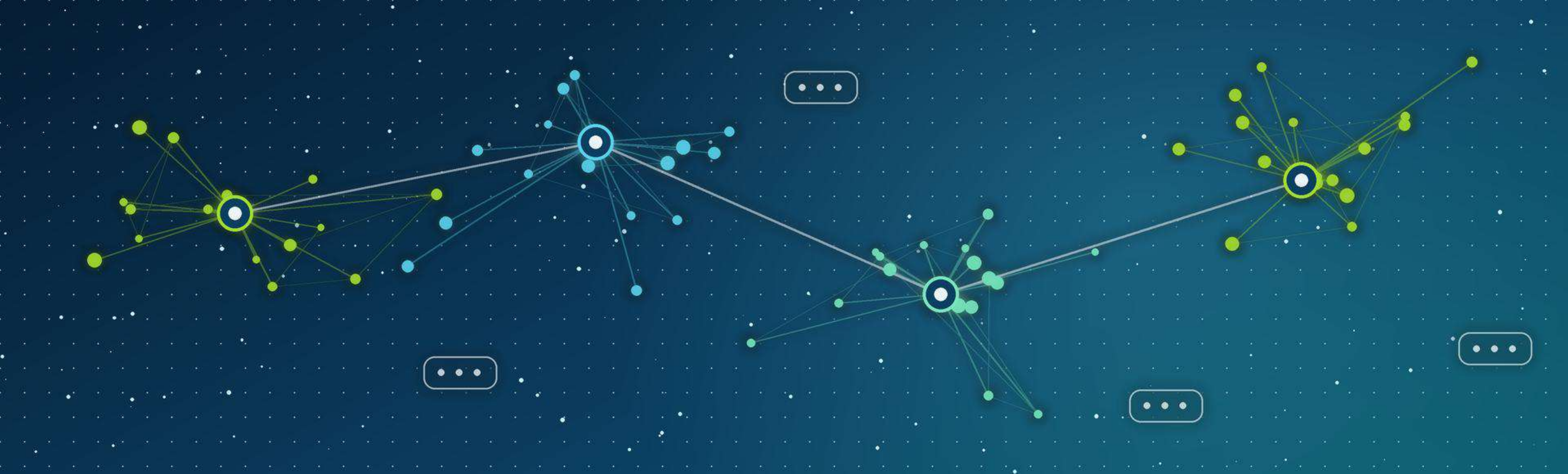
Leaflet.js

Streamlit

Profile CS / data science / GIS

Format 1 intern · 4 to 6 months

Market Indonesia & Malaysia



Subject 7 : SeedLoop AI: An Autonomous Multi-Agent Framework for Intent-Driven User Discovery and Day-0 Community-Led Growth

PFE-07

Growth

Multi-Agent AI

NLP

Growth Engineering

A multi-agent system that finds a startup's first users and turns their community into a product roadmap.

What you'll build

- 1 Intent discovery**
Find people describing the pain, ranked by intent
- 2 Dynamic hooks**
A personalised quiz or prototype per prospect
- 3 Community orchestration**
Slack / Discord pods, moderation, intros
- 4 Feedback to backlog**
Prioritised, traceable to source conversations

KEY CHALLENGE

Turn messy, contradictory chat into a backlog a founder would build.

TARGET

Match a human PM's backlog: rank correlation and top-10 precision/recall.

TECH STACK

Python

LangGraph

CrewAI

LLM APIs

Qdrant

Next.js

Slack API

Discord API

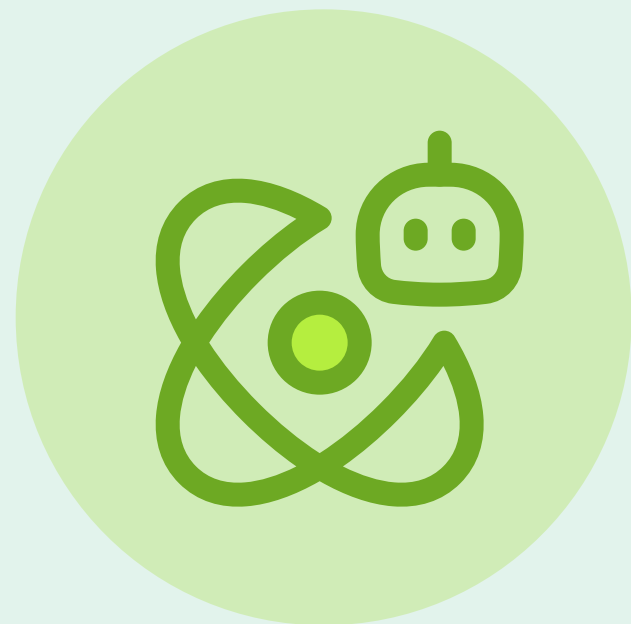
PostgreSQL

Profile Software / AI engineering

Format 1 intern · 4 to 6 months

Market Global startup founders

Expertise



Artificial Intelligence



Software development



Marketing and growth

How to Apply?

Requirements

- Willing to learn and take the challenge
- Have relevant skills and interests
- Have an adequate level of written and spoken English
- Able to work side by side with people of all backgrounds and disciplines
- Available for full-time and on-site internship
- Available for long-term work after the internship

Advantages

- Monthly bonus according to profile
- Achievement bonus
- In demand Trainings

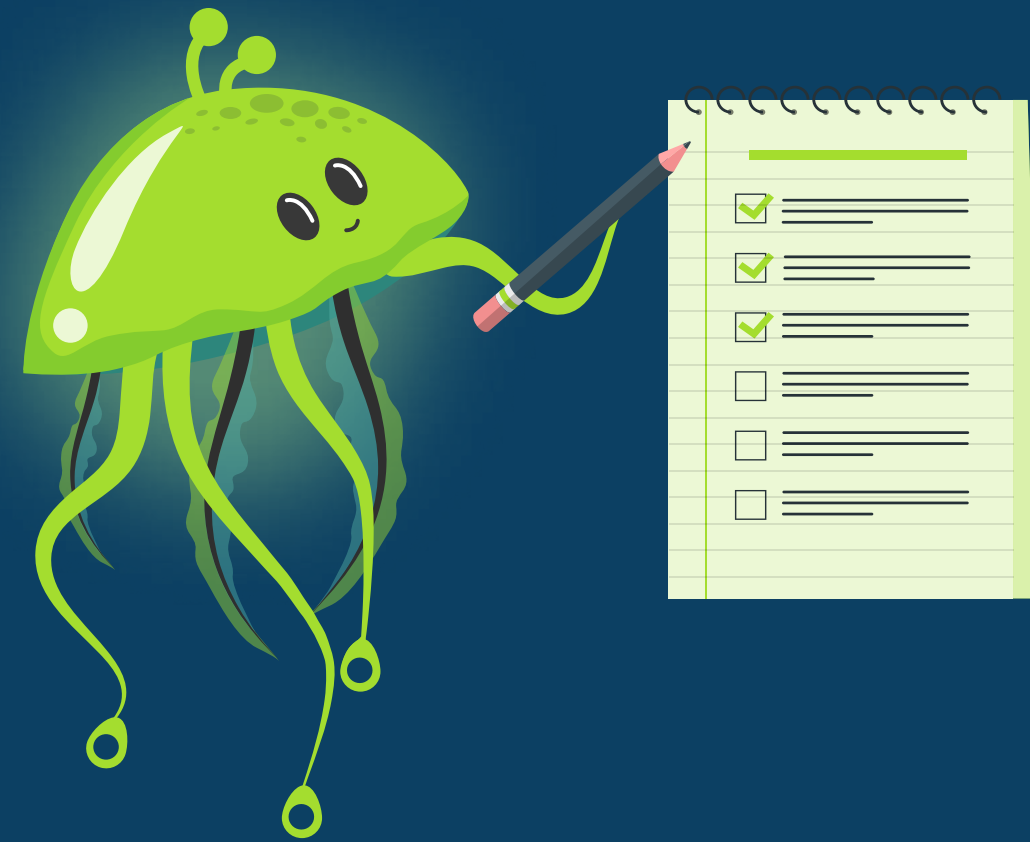
Location

- Knowledge Place, Monastir, Tunisia

Application

- Application only accepted by a formal email with an English CV and a cover letter sent to **career@olindias.com**

Innovating **Together** for a Lasting **Impact!**



Email

career@olindias.com

Location

Monastir, Tunisia

Website

www.olindias.com