



Solutions for complex multidisciplinary problems

Company Overview

EcoFinSys LLC (EFS) provides innovative solutions for problems requiring complex applied mathematics and statistics based modeling, simulation, data science, and machine learning. We use our expertise to deliver actionable insights and robust solutions across different types of organizations. Our strength is in bridging discipline boundaries to address real-world problems with scientific rigor.

Approach and Methodology

At EFS, we adhere to scientific principles. We prioritize explainability and robustness over false accuracy. Our methodology includes:

- Formulation of executive questions so that the model results are actionable. A perfect model that has levers and knobs that the client cannot control is useless.
- Thorough project definition and team selection to ensure optimal outcomes at minimal cost.
- Strategic IT architecture and technology stack selection to avoid vendor lock-in, always preferring open-source solutions.
- Analysis and adaptation of recent scientific research to ensure that the best available methods are used.
- Careful and systematic entity naming, metadata, and ontology to ensure model integrity and future extendability.

Core Competencies

- Deep expertise in quantitative modeling, statistical analysis, and machine and deep learning.
- Advanced software engineering and data architecture
- Physicist's approach: start with the simplest model and increase complexity only when required by the use case and allowed by available data. Our range of modeling techniques spans everything from descriptive statistics to highly non-linear neural networks.
- Experienced in simulation techniques and Monte Carlo analysis
- Strong background in risk management and quantitative finance
- Legacy data system modernization and ETL
- Design and implementation of metrics, reports and dashboard

Technologies

- Linux, Python, Ruby, Elixir, C/C++, SQL, Matlab, R, Postgres, Oracle, Neo4j, Kafka, Qdrant, PGVector, PyTorch, YOLO, MOT, OpenCV, PIL, Docker, Podman, OpenClaw, Ollama, Claude, ontologies
- scientific computing, mixed integer programming and non-linear optimization, simulation, Monte Carlo

COMPANY

Company Name	EcoFinSys LLC
State of Corporation	Delaware
Year Incorporated	2018
Corporation Type	LLC
CAGE Code	8HY25
UEI	ULGSN9ER9W75
DUNS Number	117455193
Principal	Dr. Juha E. Korpela

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NAICS

541511	Custom Computer Programming Services
541690	Other Scientific and Technical Consulting Services
541720	Research and Development in the Social Sciences
541512	Computer Systems Design Services
541618	Other Management Consulting Services
541715	Research and Development in the Physical, Engineering
541990	All Other Professional, Scientific and Technical Services

CONTRACTS

SeaPort NxG	N0017825D7298
GSA MAS	Application pending

CLIENTS

HII Fleet Support Group LLC
Naval Systems Inc
Striveworks LLC

