KISHORE DB - LIST OF PUBLICATIONS AND TECHNICAL CONTRIBUTIONS

Trivandrum, India | +91 9072092030 | kishoredb@gmail.com | linkedin.com/in/dbkishore
Research & Open Projects: https://github.com/kishoredb

Research Interests: Scientific Computing | Computational Engineering | Explainable AI | HPC | Learning Analytics | Game-Based Learning

A. Peer-Reviewed Articles

– *No peer-reviewed journal publications yet.*
Currently preparing a manuscript titled:
"AI-Enhanced Inverse Modeling in Computational Engineering: A Framework for Transparent Model Discovery"
(Target journal: *Computational Intelligence and Engineering Systems*, planned 2025).

B. Technical Disclosure / Patent

1. **Kishore DB (2023):**
   Automated Security Vulnerability Triaging in Multi-Tenant SaaS Environments.
   Finastra Technical Disclosure Registry #SEC-2023-41 (Patent Pending).
   Focus: AI-based automation of vulnerability prioritization in multi-tenant computational systems.

C. Invited Talks & Mentoring

2. **DevSecOps Culture for AI and Computational Engineering**: Finastra Global Engineering Summit (2022).
   Topic: Integration of explainable AI, observability, and computational governance in high-scale environments.
3. **Explainable AI for Model Interpretability in Scientific Simulation:** Finastra Innovation Forum (2023).
   Topic: Using SHAP and LIME for interpretability in simulation-based AI modeling.
4. **Global Mentor (2019–Present):**
   Mentored postgraduate students and early-career engineers on applied AI, explainable ML, and computational simulation techniques.

D. Independent & Applied Research Projects

5. **Aegis (2020–Present):**
   AI-driven innovation and simulation framework for computational workflows integrating explainable AI and cloud microservices.
   Focus: Generative AI integration, numerical model explainability, and workflow automation.
6. **CredScore (2022):**
   Explainable AI system for transparent risk scoring using SHAP and LIME; awarded *Global Hackathon Winner 2022 (Finastra)*.
7. **AI-Driven Fraud Detection Engine (2021–2023):**
   Multi-model fraud detection system using hybrid anomaly and NLP-based detection for numerical signals.
8. **Cloud HPC Workflow Simulator (2023–Present):**
   AI-assisted orchestration tool for computational experiments using Azure Kubernetes and Python HPC pipelines.

E. Educational Technology & Learning Analytics

9. **Explainable AI and Scientific Visualization Curriculum (2020–2023):**
   Designed and taught modules combining AI explainability, simulation visualization, and computational reasoning for STEM learners.
10. **Learning Analytics for Computational Thinking (2024):**
    Developed a framework for analyzing student reasoning in computational experiments using AI-based feedback models.

Statement:
This publication list reflects both applied and research-oriented outputs bridging **computational engineering, AI explainability, and educational technology.** As an independent researcher (since May 2023) and former Director of Engineering & AI Platforms at Finastra (2016–2023), I continue to develop open, cloud-native, and data-driven frameworks for explainable computation and educational innovation.