

Hoda Rezvanjoo

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Kent, United Kingdom | Decision Systems Developer | Co-Founding Director, Heagital Ltd

PROFILE

Decision systems developer specialising in constraint optimisation, business intelligence and applied decision engineering. Builds Python-based systems that translate operational data into structured, auditable decisions. Background in industrial engineering and business administration, with ten years of commercial experience before transitioning into technical development in 2022. Completed a doctorate on BI and decision quality in UK SMEs in 2026. Currently co-founding director of a UK MedTech startup building point-of-care diagnostic technology for the NHS.

RECOGNITION AND PUBLICATIONS

Speaker, One Tech World 2026

WeAreTechWomen Global Conference | March 2026

Independent, unpaid participation

- Delivered a 22-minute technical session: From Data to Decisions: Designing Practical Decision Frameworks in Uncertain Environments.
- Session recording publicly available on the official WeAreTechWomen YouTube channel: youtu.be/TyQe_tCt1ZE

Article, Towards Data Science

Insight Media Group | July 2026

The Threshold Is a Price, Not a Percentage | towardsdatascience.com/the-threshold-is-a-price-not-a-percentage

- Editorially reviewed and accepted; selected as an Editor's Pick with promotion across Towards Data Science channels.
- Decision-theory piece on when an AI agent should act autonomously versus escalate to a human, framed around expected-value and cost-of-error reasoning.

Article, WeAreTechWomen

Why Dashboards Don't Always Improve Decisions | May 2026

- Examines when BI improves SME decisions and when it does not, drawing on the SSRN study above: wearetechwomen.com/why-dashboards-dont-always-improve-decisions

Peer-Reviewed Software Paper (in revision)

SoftwareX, Elsevier | 2026

CLARO: Constrained budget allocation with rule-based decision interpretation

- Peer reviewed; minor revisions requested. Describes the open-source Linear Programming allocation engine and its rule-based interpretation layer.

Research Preprint

SSRN Information Systems and Decision-Making eJournal

Business Intelligence as a Differentiated Decision Support Capability: A Multi-Level Analysis of SMEs' Decision-Making Quality | DOI: [10.2139/ssrn.6465540](https://doi.org/10.2139/ssrn.6465540)

- Quantitative study of 186 SME managers across South-East England.
- Examined BI utilisation at strategic, tactical and operational levels and its relationship to decision-making quality.
- Key finding: operational-level BI shows the strongest association with decision quality in resource-constrained SME environments.

TECHNICAL PROJECTS

Digital Budget Optimisation Engine (CLARO)

github.com/Hoda834/digital-budget-optimisation-engine

Python | Linear Programming | Streamlit | Live app: claro-decision-support.streamlit.app

- Open-source constraint-based Linear Programming system allocating a fixed marketing budget across platforms and objectives under user-defined policy constraints.
- Seven-module pipeline covering scenario analysis, KPI forecasting and a deterministic decision interpretation layer reporting binding constraints and shadow prices.
- Subject of the SoftwareX paper above; released under the MIT licence with a 214-test suite.

Heagital Market Decision Engine

github.com/Hoda834/heagital-market-decision-engine

Python | Weighted Scoring Model | NHS QOF Data

- Ranks all 42 NHS Integrated Care Boards using three weighted dimensions: Clinical Risk, Adoption Readiness and Procurement Friction.
- Runs four named scenario configurations against NHS AF register, treatment gap and Warfarin prescribing data.
- Outputs directly informed Heagital board-level pilot region selection: Midlands, South West and South East, representing 53.4% of national addressable opportunity.

Predictive Risk Assessment Framework

github.com/Hoda834/Predictive-Risk-Assessment-Framework

Python | ISO 14971-aligned | MedTech context

- Risk intelligence system for early-stage POCT device development.
- Pattern-based scoring across likelihood, impact and detectability with decision gate guidance and full audit trail.

PROFESSIONAL EXPERIENCE

Co-Founding Director and CSO

Nov 2025 to present

Heagital Ltd, UK | Companies House No. 16855753

- Appointed as director by Companies House AP01 filing, 14 November 2025.
- Lead decision intelligence infrastructure and commercial strategy for NHS market entry.
- Built market decision engine and financial scenario models used in board strategy and seed investment materials.

Decision Systems Developer (independent voluntary collaboration)

2025 to early 2026

AsOne Design Limited, Manchester, UK

- Independently designed and implemented a constraint-based optimisation workflow for vendor allocation and technical budget distribution, connected to internal performance data sources.
- Configured reporting outputs and notification workflows within the company's existing planning infrastructure; the system remained in active operational use into 2026.

Business Development Executive

May 2023 to present

DiA-Design-Itude Associates, UK

- Client pipeline development and CRM-based sales reporting for a UK architecture and design studio.

Teaching Assistant

Jun 2022 to Aug 2022

UBIS, Geneva, Switzerland

- Supported postgraduate business administration teaching during doctoral programme.

Prior to 2022: ten years in commercial roles in Iran. Sales Engineer at Rena After-Sales Service Volvo Trucks (6 years), Marketing Manager at Soodbar Automotive Group, Digital Marketing Manager at Caspian Distribution Pirelli. Consistent use of CRM systems, performance databases and sales analytics.

EDUCATION

DBA: UBIS, University of Business Innovation and Sustainability | 2022 to 2026 | Completed April 2026

Dissertation: A Quantitative Correlational Study of Business Intelligence Utilization and Decision-Making Quality Across Managerial Levels in SMEs in Southeast UK. IRB-approved; all three hypotheses supported; published as the SSRN preprint above.

MBA: Payame Noor University, Iran | 2015 to 2019

BSc Industrial Engineering (Systems): Islamic Azad University, Iran | 2006 to 2010

TECHNICAL SKILLS

Optimisation: Python, PuLP, linear programming, constraint modelling, scenario analysis, state machine design

BI and Data: Power BI, SQL, ETL pipeline design, Streamlit, dashboard infrastructure

Research: Quantitative design, survey methodology, multi-level statistical analysis, SPSS

ADDITIONAL

McKinsey Forward Programme: Structured problem solving and analytical reasoning.

Writing: Articles on decision science and BI in Towards Data Science, WeAreTechWomen and LinkedIn.

Portfolio: hodarezvanjoo.com