

JONATHAN THANGADURAI SELVARAJ

TECHNICAL PRODUCT OWNER | PRODUCT DISCOVERY | SYSTEMS & APPLIED AI

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PROFILE

Technical Product Owner with experience taking emerging technology from an initial opportunity through discovery, validation and working product foundations. I combine product thinking, systems engineering and hands-on development to create direction where the problem, product and route to adoption are still taking shape. My broader experience spans enterprise integration, applied research, public-sector innovation and cross-functional delivery.

WHAT I BRING

Product creation and discovery: Ideation, problem framing, customer discovery, use-case validation, roadmaps, backlogs and acceptance criteria.

Technical product building: Architecture, interpretation logic, validation methods, enterprise integrations, data flows and hands-on prototyping.

Adoption and orchestration: Building sponsorship, connecting strategic ambitions to user needs, and maintaining momentum across technical and business teams.

EXPERIENCE

TNO - Netherlands Organisation for Applied Scientific Research

SEP 2024 - PRESENT

Three successive assignments across product ownership, applied research and organisation strategy

The Hague, Netherlands

Product Owner - Market Intelligence Platform

JAN 2026 - PRESENT

- Identified an opportunity to improve how TNO discovers market developments and portfolio whitespace, then developed the initial product concept and methodology and connected it to the organisation's wider GenAI ambitions.
- Led product discovery with analysts, Market Strategy, Business Development and six external companies to understand decision needs, validate use cases and turn a broad technical opportunity into a focused product direction.
- Designed and developed the interpretation layer - including schemas, prompts, classification logic, validation rules and supporting architecture - to transform unstructured corporate disclosures into structured, traceable market intelligence.
- Served as the consistent point of continuity across users, data scientists and business stakeholders: maintaining delivery flow, translating feedback into development decisions, and building sponsorship with the GenAI Guild and Business Development for reuse in other data-focused products.

Project Manager - Air Quality & Emissions

MAY 2025 - DEC 2025

- Coordinated five applied-research projects across government, industry and consortium partners, managing changing scope, dependencies and competing priorities.
- Resolved a partner withdrawal risk through a reduced-scope delivery and explored how HPC-dependent air-quality models could become more accessible to non-specialist users in a Kenya-focused programme.

Organisation Strategy Consultant - Geological Survey of the Netherlands

SEP 2024 - APR 2025

- Worked with the Enterprise Architecture team to map products, data sources, dependencies and accountable owners across a six-department division, creating a shared view of how work and information moved through the organisation.
- Facilitated A3 and 5-Why workshops on recurring handover, ownership and prioritisation problems, helping managers distinguish local symptoms from cross-functional process issues.
- Mapped the primary-process value chain and designed a workflow and governance framework that clarified upstream ownership, bridged research and agile delivery teams, and informed the division's move towards a product-oriented operating model.

Integration Solutions Consultant

OCT 2020 - JUL 2022

Flex Ltd.

Chennai, India

- Built and owned 10+ MuleSoft integrations across PLM, MES, QMS and ERP systems for healthcare manufacturing operations in India and Southeast Asia.
- Connected factory operations, quality control and risk-management systems to global ERP platforms, making production, quality and error-log data available for downstream analysis and operational optimisation.
- Reduced integration processing time by 70% through reusable patterns, buffered and scheduled flows, API performance measures, structured logging and feedback from operational teams.
- Led Agile delivery through a shift from legacy and monolithic integrations towards modular, cloud-oriented architecture, coordinating releases across engineering and Industry 4.0 factory environments.
- Held weekend on-call responsibility for production deployments in live healthcare manufacturing, investigating logs, reproducing intermittent failures and helping restore critical integration flows.

SELECTED PROJECTS

MineMatch - data spaces for mining traceability

APR 2023 - JUL 2023

Project Lead & Developer | Solita industry capstone

Lappeenranta, Finland

- Led a five-person team through market analysis, platform design and development, exploring how secure data spaces could support cross-organisation exchange of mining and waste data.
- Designed APIs and traceable data-sharing flows and prototyped digital product passports on Hyperledger Fabric, balancing commercial relevance, sustainability value and technical feasibility.

VaxiChain - IoT cold-chain monitoring

NOV 2022 - FEB 2023

- Developed a prototype using Kotlin, MQTT, OpenHAB, InfluxDB and Grafana to monitor simulated vaccine-storage conditions and trigger automated control workflows.

Dart & Charge - RFID/IoT toll collection

MAY 2019 - MAR 2020

- Led a Smart India Hackathon-winning prototype with the Indian Ministry of Road Transport and Highways, using Raspberry Pi, RFID and MQTT to demonstrate automated toll collection.

Beehive - community renewable-energy system

NOV 2022 - JUL 2023

- Built a proof of concept for community-level renewable-energy distribution and energy-data management as part of the CINI Challenge in Italy, using React, Kotlin and Python.

EDUCATION

Erasmus Mundus Joint Master's Degree - Software Engineering & Sustainability

SEP 2022 - AUG 2024

VU Amsterdam (Netherlands) | LUT University (Finland) | University of L'Aquila (Italy)

Fully funded scholarship

- MSc programme spanning software architecture, systems engineering, system-oriented design and sustainability; thesis on AI for Corporate Social Responsibility.

Bachelor of Technology - Information Technology

JUL 2016 - OCT 2020

Anna University

Chennai, India

- Graduated Cum Laude in the top 10 percentile.

SELECTED RECOGNITION

Smart India Hackathon: Winner, 2019 - first among 150+ teams; INR 25,000 prototype grant for Dart & Charge.

Tamil Nadu Government Grant: Awarded in 2018 for early blockchain applications in voting and public food distribution.

Solve the SDGs Hackathon: Runner-up, 2023 - SpinGreen circular-fashion concept developed with Spinnova.

TECHNICAL TOOLKIT

Product creation and discovery. I originate and frame product opportunities, validate demand, translate evidence into roadmaps and backlogs, and build the sponsorship and adoption path around the product. *Working toolkit:* product ownership, customer discovery, user stories, acceptance criteria, Agile/Scrum, A3 and 5-Why.

Enterprise systems and integration. I design and operate reliable data flows across manufacturing and business systems, with attention to failure modes, monitoring and operational consequences. *Working toolkit:* MuleSoft, REST/SOAP APIs, DataWeave, RabbitMQ, PLM, MES, QMS and ERP.

Applied AI, data and cloud. I develop the interpretation and validation foundations around GenAI workflows, then connect architectural choices to traceability, cost, scaling and reuse. *Working toolkit:* schemas, prompts, classification logic, Python, SQL, Pydantic, Azure, PostgreSQL and Docker.

Connected systems and prototyping. I build enough of the system to test the idea with real workflows, whether the interface is an API, sensor stream, dashboard or lightweight application. *Working toolkit:* MQTT, OpenHAB, InfluxDB, Grafana, TypeScript, React and Kotlin.

LANGUAGES

Languages: English (C2), Tamil (C2), Dutch (A2, learning towards B1), Hindi (A2).

OPEN-SOURCE CONTRIBUTIONS

Mentor and contributor - freeCodeCamp

AUG 2021 - PRESENT

- Support learners through course-content feedback, project guidance and practical explanations, helping make technical learning more approachable for a global community.

Contributor - Mozilla Common Voice

SEP 2019 - PRESENT

- Contributed 50+ hours validating speech recordings for an open multilingual dataset used to improve the accessibility and representation of speech technology.