

Frank Lynam

Engineering Leader & AI Engineer | Glenageary, Co. Dublin, Ireland | +353-85-7148293 |

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Summary

Engineering leader and hands-on builder with over 20 years in the industry, spanning regulated healthcare, industrial IoT, digital cultural heritage, and satellite communications. Spent the last decade building and growing engineering organisations in high-stakes environments, most of that delivering medical device software under FDA design control. Now works fractionally as a senior AI engineer and technical lead, designing agentic systems and the architecture around them while staying deep in the code. Background spans clinical platform engineering, regulated software delivery under ISO 13485 and IEC 62304, distributed team leadership, and full-stack development.

Technical Skills

- **AI/Agentic:** LangGraph, LiveKit, MCP (Model Context Protocol), Langfuse, OpenAI Realtime API, Claude Code, Cursor AI
 - **Languages:** TypeScript, JavaScript, Python, C#, Swift
 - **Frontend:** React, Next.js, React Native, Three.js, D3.js
 - **Game/3D:** Unity, Blender
 - **Backend:** Node.js, Express, FastAPI
 - **Database:** MongoDB, DynamoDB, BigQuery
 - **Cloud & Infrastructure:** AWS (Lambda, ECS Fargate, DynamoDB, EventBridge, CDK, Amplify), GCP, Terraform
 - **Compliance:** HIPAA, SOC2, SaMD, FDA Design Control, ISO 13485, IEC 62304, QMS, DevSecOps
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Professional Experience

Maternitec, Dublin | Technical Lead (Fractional)

Jul 2026 – present

- Provide senior technical leadership and hands-on engineering to a medical device startup at NovaUCD building a fetal activity detection wearable.
- Delivered a build-versus-buy analysis and recommendation covering the mobile application and cloud layer.
- Defining the target architecture and the plan to bring the product under design control (IEC 62304) as early in its life as possible.
- Scoping the company's cybersecurity and FDA obligations, establishing where the line falls between what must be owned in-house and what can reasonably be offloaded to a supplier.
- Drafted the company's AI Tool Usage policy, now being implemented across the business, governing how AI tooling is used.

MinFarm Tech, Dublin | Senior AI Engineer (Fractional)

May 2026 – present

- Designing and building an MCP server that lets LLMs consume data sourced from MinFarm Gateway units, built in TypeScript on Express and the Model Context Protocol SDK.

- Built a family of monitoring demonstrators in which autonomous LangGraph agents investigate industrial sensor data over the MCP server, with each agent's reasoning rendered live on web dashboards. A portal and family-aware admin console aggregate catalogue and scenario state from a shared FastAPI synthetic data layer.
- Deployed the platform on AWS using ECS Fargate for the agent backends and Amplify for the dashboards, provisioned end to end with Terraform.
- Building AI proofs of concept across the MinFarm product portfolio, assessing feasibility and establishing integration patterns for LLM adoption at scale.

Woebot Health, Dublin | Senior AI Engineer

Sep 2025 – Mar 2026

- Built a realtime multi-agent conversational AI system using LangGraph and LiveKit for voice and text interaction.
- Applied AI-assisted development practices daily using Claude Code and Cursor AI to accelerate delivery and improve engineering throughput.
- Full-stack development across Node.js, React Native, and Python.

Woebot Health, Dublin | VP of Engineering

Aug 2021 – Apr 2025

- Served as second-in-command to the CTO, directly leading backend engineering teams across a distributed organisation of 30+ engineers in Dublin and the US.
- Led the delivery of a Software as a Medical Device (SaMD) mental health platform, achieving peak usage of millions of messages transmitted monthly with zero major production incidents.
- Drove a multi-year engineering effort to bring products under FDA design control, establishing QMS and ISO 13485-compliant release processes across the platform.
- Designed isolated execution environments enabling parallel clinical study deployments without cross-contamination.
- Owned the technical roadmap, aligning engineering execution with clinical product strategy and regulatory requirements including HIPAA and SOC2.
- Embedded CI/CD pipelines, automated testing, and rigorous code review standards enabling aggressive weekly delivery cadence without compromising clinical safety.
- Developed multiple engineers from individual contributor to senior and staff level.

Woebot Health, Dublin | Engineering Manager

Oct 2019 – Aug 2021

- Grew the Dublin engineering team from 3 to 10, establishing the foundations of the backend platform engineering practice.
- Managed a backend engineering team building and deploying Node.js applications on AWS.

MinFarm Tech, Dublin | Senior Software Developer

Jan 2018 – Aug 2019

- Contracted to explore and assess new business opportunities in the LoRaWAN remote IoT sensor domain.
- Delivered proofs of concept across mobile (iOS Swift), web (React), and backend (Node.js).

Noho, Dublin | Head of Interactive Development

Dec 2015 – Sep 2017

- Directed a small software development team building AR/VR and multi-projector display solutions for immersive installations in the museum market.
- Notable clients included the National Museum of Ireland, the Allard Pierson Museum of Antiquities in Amsterdam, and Alltech.

Klas Group Holdings, Dublin | Chair of the Board

Aug 2013 – Dec 2014

- Led the board through the successful sale of the group to a management consortium, with revenues rising to 5+ million USD annually.

Klas Group Holdings, Dublin | Director

May 2012 – Aug 2013

- Provided technical oversight of the group's product development strategy, supporting the scaling of the team to 80 employees.

Klas Group Holdings, Dublin | Software Engineer

1998 – 2006

- Built commercially successful products in the satcomm and hardware encryption domains.
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Projects

Agentic Observability Platform | MinFarm Tech

- Built a family of proof-of-concept demonstrators in which autonomous LangGraph agents investigate industrial sensors, wellhead pressure and motor vibration among them, over an MCP server.
- Web dashboards subscribe to each agent's live event stream and render everything the agent emits, giving an operator a single real-time view onto the reasoning of an agentic system.
- Stack: Python/LangGraph, FastAPI, TypeScript/Next.js/React, deployed on AWS with Terraform.

Realtime Agentic Conversational AI | Woebot Health

- Built a production realtime multi-agent conversational system using LangGraph and LiveKit for voice and text interaction.
- Implemented full-stack integration using Node.js and React Native, with a focus on long-term system coherence alongside delivery pace.

Large-Scale Backend Platform | Woebot Health

- Led the engineering organisation delivering a backend platform serving millions of messages monthly across a 30+ person globally distributed team.
 - Achieved SOC2 certification and zero major production incidents across a multi-year delivery programme on AWS.
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Personal Projects

Visualising The Metals | metals.franklynam.com

- Browser-based 3D terrain explorer that lets you fly over the landscape around Dalkey and Dún Laoghaire and trace the route of a 19th-century horse-drawn granite railway. A map toggle switches between a modern satellite layer and an 1837 Ordnance Survey map.
- Built raw government LiDAR GeoTIFF data into a 16-bit greyscale heightmap for Three.js displacement mapping, processed in QGIS and Python.
- Stack: Next.js 15, React 19, Three.js, TypeScript, Python, AWS Amplify.

Shadow Over Banner Hill | sobh.franklynam.com

- Browser-based first-person choose-your-own-adventure game set in a Lovecraftian horror narrative, with a branching story driven by the ink narrative engine and a 2.5D aesthetic placing flat billboard characters in a full 3D environment.
- Automated Unity editor operations through MCP for Unity driven by Claude Code.
- Stack: Unity 6, C#, ink, Blender, WebGL, URP, Cinemachine.

Tabella | Trinity College Dublin

- Latin learning platform built for the Department of Classics at Trinity College Dublin, having been invited onto the project by his alma mater.
 - Migrated the original PHP/WordPress site to a static Next.js site, converting the WordPress SQL export into static JSON serving 15 lessons and 16 grammar topics as dynamic routes.
 - Stack: Next.js 14, TypeScript, Tailwind CSS, AWS Amplify.
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Education

Trinity College Dublin | Doctor of Philosophy (PhD) in Digital Arts and Humanities *2011 – 2015*

Cambridge University | Master of Philosophy (MPhil) in Archaeology — *with Distinction 2010 – 2011*

Trinity College Dublin | Bachelor of Arts (B.A.) in Ancient History and Archaeology / Italian — *First Class Honours 2006 – 2010*