

JACOB SZWARCBERG

Principal Product Manager · Full-Stack Development

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ABOUT

Product leader who also builds. I own the full product lifecycle, from strategy, discovery, requirements and roadmap through to a shipped, revenue-generating product, and I develop the software myself, so every product decision is grounded in what it actually takes to deliver. My strength is turning ambiguous, real-world problems into working products: scoping requirements directly with customers, making the architecture and product calls, and driving execution to production under real constraints. I've launched commercial SaaS platforms, AI-powered tools, and hardware-software systems now in the hands of contractors and government agencies. I move fast without sacrificing rigor, and I translate complex technical work into measurable business value.

EXPERIENCE

TransTech Systems Inc. - Principal Product Manager

Los Angeles, CA · Jan 2026 – Present

Product Strategy & Full-Stack Ownership

- Own the entire product lifecycle for TransTech's software portfolio. Strategy, roadmap, discovery, and requirements while personally performing 100% of the software development across web, mobile, backend, and embedded.
- Operate as the sole product manager and engineer on the platform: make the product, architecture, and build decisions, then ship the production code myself.
- Translate field and customer needs into shipped features and measurable revenue, turning complex hardware-software capabilities into closed sales deals.
- Point of contact for all customers speaking directly to leadership and regional decision makers.

TransTech Connect - Revenue-Generating SaaS Platform

- Identified opportunity for eliminating manual work associated with heavy highway construction quality control.
- Led customer discussions, discovery, and pitched the new product offering to company leadership.
- Architected and built a full multi-tenant SaaS product 0-to-1. Commercial platform with organizations, role-based access, and recurring subscription revenue.
- Delivered the product across three surfaces. React web app, a React Native mobile app, and in-gauge software running directly on the device.
- Led sales and demo calls with customers including top National construction firms.

Gauge-to-Cloud Data Pipeline

- Designed and built the end-to-end system that streams measurements directly from the density gauge to the cloud, with secure device pairing, and real-time sync.
- Eliminated manual data transfer, giving field crews and office staff live access to density results as they are collected.

AI Features

- Built AI-generated daily summary reports that turn raw measurement data into plain-language field reporting.
- Built a full AI chatbot agent (Claude API, agentic tool-use loop) with function-calling APIs that answer natural-language questions over an organization's live construction data.

Ames Connect - DOT Workflow Automation

- Automated DOT project submission and pay-adjustment calculation, cutting cost and turnaround time for both contractors and state DOTs.
- Built a multi-tenant shared-project model letting contractors and DOTs collaborate on the same road-profiling data, with IRI computation and pay calculators for multiple states.
- Led product discovery by meeting with DOT engineers to understand workflow bottlenecks and pain points.
- Full GIS platform for road profiling data visualization and analysis.

Valinor Systems LLC - Owner & Software Consultant

Los Angeles, CA · Dec 2024 – Dec 2025

- Retained by TransTech Systems to rebuild its gauge calibration portal and complete development of a new gauge product - owning requirements, technical documentation, product strategy, full-stack development, and reverse engineering of legacy software to preserve existing calibration logic.
- **Machine Shop ERP (client)** - Led the design and full-stack build of an ERP/production-control system for a precision machine-shop client: drove the core product decisions, then implemented a kanban production workflow, serialized part traceability, AI-assisted quoting, and querying of production data to support ISO 9001 compliance.

Viking Cruises - Technical Product Manager

Los Angeles, CA · Apr 2023 – Dec 2024

- Led development of an application that cut internal task-completion time from hours to minutes through automation.

- Led the restructure of yield and inventory-availability processes, generating seven figures in oversell savings across annual sailings.
- Designed and implemented JIRA dashboards to visualize team workload and performance, and analyzed 24 months of JIRA data to eliminate process bottlenecks across all software teams.
- Designed data pipelines and APIs to connect and sync native and web application databases, partnering directly with end-users on automation opportunities.

Accenture - Technology Business Analyst

Los Angeles, CA · Dec 2021 – Dec 2022

- Conducted data analysis and built reports supporting executive decision-making; validated large datasets from SAP, Confluence, and Salesforce.
- Maintained a 300-feature backlog with product requirements linked to teams, meetings, and roadmaps.
- Prepared business-process diagrams and delivered presentations to stakeholders including senior executives and clients.

Ventur - Owner

Albany, NY · Jan 2020 – Nov 2021

- Led a real-estate software company through ideation, capital raise, hiring, development, and launch. Building the platform 0-to-1 on consistent user feedback.
- Ran an agile system with 5 developers and authored technical documentation for integrating 10 different data providers.
- Raised capital on the idea from local angels and business leaders.

574 Machine Tool - Process Engineer

Albany, NY · Jun 2018 – Jan 2020

- Implemented lean-manufacturing process improvements (50% reduction in production time), designed tungsten-carbide coating processes, and led root-cause analysis and QA across 5 product lines to a 0.001 mm tolerance.

Advanced Controls & Automation - Industrial Engineer

Albany, NY · Jun 2016 – Jun 2018

- Built and delivered 20+ custom automation systems, programming control systems to cut cycle times and maintaining full technical documentation (schematics, BOMs, manuals) across 5 parallel projects.

EDUCATION

Rensselaer Polytechnic Institute

Troy, NY · Class of 2021

- Dual Degree: B.S. Industrial Engineering & B.S. Business Management.

TECHNICAL SKILLS

Programming Languages: JavaScript/TypeScript, Python, C#, C, SQL, Java

Front-End & Mobile: React, React Native (Expo), Figma, UI/UX Design

Back-End & APIs: Node.js, Deno/Edge Functions, REST APIs, Stripe Billing, Twilio, Auth & Billing Architecture

AI & Data: LLM/Claude API integration & agents, AI-assisted analytics, prompt engineering, GIS data visualization

Databases & Platforms: Supabase/PostgreSQL (RLS), MongoDB, SQLite, AWS, Railway

Hardware & Embedded: Hardware-Software Integration, BLE, Embedded Firmware (Zephyr/nRF, Windows IoT), Serial Comm (RS232/UART), Android Kiosk

Methodologies & Domain: Agile Scrum, Product Management, Kanban, Lean Manufacturing, R&D