Prince Soni

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Summary

Product-focused engineer who cares about the details and how the work lands on the **business side**. Builds and owns production systems for **UK clients**: real-time auction infrastructure, daily production data pipelines and **AI layers on AWS Bedrock**.

Experience

Exelion
Jul 2026 – Present
Software Development Intern — *Remote (EP Group, London, UK)*

EP E-Auction Platform — *Node.js, Socket.IO, MongoDB, Microsoft Graph*

- Inherited a legacy **e-auction platform** that crashed under load and dropped bids; rebuilt its **real-time bidding**, cloud email delivery and **access control**. Its first live auction saved **£61,000+** across suppliers in **6 countries**.
- Traced dropped bids to an unscoped broadcast making every client re-query **MongoDB** per bid, about **427 round-trips** at 60 concurrent suppliers; redesigned it as a scoped **room-based push** per auction, role and supplier, cutting that to **7**.
- Closed **three access-control vulnerabilities** with the client security team: a role-check gap letting **Viewer** accounts fire admin-only actions, an unauthenticated endpoint minting **Admin** accounts, and an **IDOR** leaking supplier messages to a competitor.
- Migrated email from **Azure Communication Services** to **Microsoft Graph API** (certificate-based app-only auth, **MSAL**), replacing static 24-hour **JWT** sessions with sliding-expiry authentication.

Daily Production Intelligence System — *Fastify, Postgres (Neon), AWS Bedrock, MCP, Playwright*

- Took complete ownership of a **daily production data pipeline** across three plants (UK, France, USA): **IMAP IDLE** ingestion, a parser auto-detecting three spreadsheet layouts, and idempotent **Postgres** writes, reaching a live dashboard in **35 to 45 seconds** (121 sheets, **18,000 rows**).
- Building the system's **AI layer**: an **MCP (Model Context Protocol) server** exposing production data as typed tools, so the client's own AI assistants can query plant output, shortfalls and per-machine detail directly instead of reading dashboards, turning the pipeline into an **advisor** rather than a report.
- Designing an **AI financial-strategist chat** on **AWS Bedrock**, grounded in the same Postgres data, to answer cash-value questions on shortfalls (each carries a **currency value** per 1,000 bags) and surface the priority areas a plant manager should act on.
- Cut cloud spend after a 5-second inbox poll kept the database permanently awake and consumed **110 of 100 free compute-hours** in a month; moved the quiet path to an in-memory cache so a poll performs **zero database work**.
- Diagnosed silent data loss where a shifted source column broke fixed-position **header detection** without raising an error: rewrote it to match on header text, verified against historical files, and **backfilled** the missing days.

Bright Roots Housing
Feb 2026 – Present
Software Engineer, Full-Stack (Contract) — *Remote (London, UK)*

- Built **Resillo**, an internal property-management and support-ticketing platform, from scratch in **Next.js/TypeScript** on **AWS EC2**, for a London supported-accommodation provider that grew from **1 property to 12** and **£50K to £700K** in annual revenue.
- Built the **AI layer** from scratch on **AWS Bedrock**: case-note drafting, document understanding and generated compliance paperwork, with **S3** presigned uploads and **DOCX/PDF** output.
- Re-architected single-tenant into **multi-tenant**: org-scoped **PostgreSQL (Neon)** with **Drizzle ORM**, a tenant-isolation query wrapper and per-org **S3**, behind a custom **CI static-analysis guard** that caught **12 cross-tenant data-leak bugs** before shipping.
- Shipped its access and safety surface: a **document-signing flow** with time-limited links and QR codes, a **super-admin portal**, **access revocation** on deactivation, and a **maintenance-mode kill switch**.
- Owned the lifecycle across a **37,500-line** codebase (**150 of 217 commits**): shipped **Finance**, **Compliance** and **Occupancy**, plus a daily accrual engine reconciled against real remittance statements.

WorldQuant
Nov 2024 – Present
Research Consultant — *Remote (United States)*

- Designed **200+ trading algorithms** based on market indicators and financial literature, using advanced statistical operators to reduce **signal decay by 18%**.
- Conducted comprehensive **alpha research** and backtesting frameworks to evaluate designed alphas, focusing on **high fitness** and **low turnover** while optimising **Sharpe/Sortino** ratios.
- Performed in-depth **time-series modelling** of market data to identify patterns and build predictive models, applying quantitative techniques to optimise trading strategies and portfolio performance.

Iprop91
May 2024 – Jun 2024
React Developer, Frontend — *Remote*

- Developed a responsive **React.js** web application for real-estate property listing and management, shipping polished UIs independently.
- Applied modern React practices such as **component-based architecture** and **responsive design** for a seamless experience across devices.

Open Source

kestra-io/kestra PR #20356 | *Merged, backported to 2.0 and 1.3* | Fixed a core bug in the **30k-star orchestration platform** where file watching rewrote every flow in an endless loop (about **10,000 writes per 30 seconds**). Traced the feedback path across the **file watcher**, **flow service** and **repository**, and added a regression test.

kestra-io/blueprints PR #434 | *Merged* | Contributed a **backtest overfitting guard** that sweeps strategy parameters across **25 years of Fama-French data** and gates results on the **Deflated Sharpe Ratio** and **Probability of Backtest Overfitting** rather than raw returns.

Projects

LawGenix AI Live | *Next.js, TypeScript, Supabase, Postgres RLS, Claude, Voyage, Astra DB*

- Legal case and document management with a **RAG pipeline** over document contents: **Voyage embeddings** in an Astra DB vector store, **Claude** for the analysis layer, and **row-level security** in Postgres so a firm only ever reads its own matters.
- Delivered **real-time streaming responses**, document management, case tracking and conversational assistance on **Supabase** auth and **Prisma ORM**.

MarketLens AI Live | *React, Vite, Node.js, Express, PDFKit*

- **Multi-agent research system**: queues up to **ten companies** and researches them **in parallel**, streaming a live activity log while agents run, then compiles the findings into a single structured brief exportable as **Markdown or PDF**.

ShikshaSetu Live | *Next.js, Postgres, pgvector, AWS Bedrock, Bhashini*

- Personalised learning platform: describe a topic or upload study material and get back an interactive lesson with an **AI teacher**, a **TA** that answers doubts, generated quizzes, and **voice narration** in Hindi and other Indian languages via **Bhashini**.

Outreachly | *Python, Streamlit, Selenium, Claude, Supabase*

- **Multi-agent automation system** converting **LinkedIn** profiles into personalised email campaigns, with **OAuth2** authentication and Gmail **SMTP** delivery on a **Supabase** backend.

Technical Skills

AI & LLM: AWS Bedrock, Claude API, RAG pipelines, vector search (pgvector, Astra DB), Voyage embeddings, MCP (Model Context Protocol), LLM tool-calling, multi-agent orchestration, streaming responses.

Languages: TypeScript, JavaScript, Python, SQL.

Frameworks: Node.js, Express, Fastify, React, Next.js, Tailwind CSS.

Data: PostgreSQL (Neon), MongoDB, Drizzle ORM, Prisma, Supabase, pgvector.

Cloud & Infra: AWS (EC2, S3, Bedrock), Azure (Graph API, Entra ID/MSAL), Docker, Vercel, multi-tenant SaaS architecture.

Realtime & Auth: Socket.IO, WebSockets, JWT, RBAC, OAuth 2.0 (certificate-based app-only).

Quantitative: Alpha research, backtesting frameworks, time-series modelling, Sharpe/Sortino optimisation.

Tooling: Git, Linux, Playwright, Selenium, Bun, Vite, exceljs.

Certifications & Achievements

WorldQuant Gold Certification | *Quantitative Research* | Gold tier for alpha research using statistical modelling and Sharpe-ratio optimisation.

WorldQuant International Quant Championship 2024 | *Top 20% of teams* | Designed high-fitness trading algorithms in international competition.

Kestra Hacktoberfest 2026 | *Track 1 and Track 2 completed* | Merged a core platform fix and a quantitative research blueprint; selected for contributor rewards by the Kestra team.

100xdevs Full Stack Development 2024 | *Advanced Backend & System Design* | Covered microservices, Kubernetes, Redis, Kafka, WebRTC and gRPC.

Education

Geetanjali Institute of Technical Studies Aug 2023 – Aug 2027 (Expected)
B.Tech, Computer Science | *CGPA: 8.9/10* *Udaipur, Rajasthan*

- **Relevant coursework:** Data Structures & Algorithms, Object-Oriented Programming, DBMS, Operating Systems, Computer Networks, Distributed Systems.