Patrick Astarita

New York City, NY | [LinkedIn](#) | [GitHub](#) |

EXPERIENCE

Software Design Engineer *PromptLayer* (Contractor) – New York City   **Q4 2024**
- Built a full-stack generative UI chatbot app as a technical demonstration tool and Typescript-specific tutorial to show of the prompt-versioning capabilities of the PromptLayer product.
- Designed UI/UX flows, modeled ERD, defined Prisma schema, implemented Zod return-type validation, and mapped LLM-calls with prompt versioning logic and rate-limiting. [Deployed](#) on Vercel with an integrated Neon DB.

Software Engineer *General Fractal Corporation* – New York City   **Q2 2024 – Present**
- Spearheaded site development, sales automation, systematized growth operations for the SWE bootcamp, organized hackathons([1](#), [2](#), [3](#), [4](#)+), automated growth metrics and routine operations.

Principal Design Engineer, Founder *Factorita Industries, Inc.* – San Francisco, CA   **Q3 2021 – Present**

I established four innovative manufacturing operations with four clients:

Recurrent Labs – Oakland, CA   **Q2 2023 – Q3 2023**
- Built our '*Factorita*' product with custom CAD-CAM code to generate & mill unique, digitally-interactive tokens.

Machinedplates.com – Orland, CA   **Q4 2022 – Q2 2023**
- Developed software for a [CAD-interfacing web-app](#) & Built a dedicated factory that streamlines the design, DFM, and production of custom-machined 6061 aluminum parts in a semi-automated 6500sqft factory.

Icon Technologies, Inc. – Vallejo, CA   **Q1 2022 – Q4 2022**
- Built a factory that makes molds for in-the-field casting of window-sills & lintels for 3D printed buildings.

G&J, LLC. – San Francisco, CA   **Q4 2021 – Q1 2022**
- Built a robotic fiber-reinforced concrete spray-casting work cell to produce heated furniture on open-face molds.

I provided Design Engineering, DFM, and Manufacturing Execution Services to clients including:

Alphabet Inc. [Google Geo Team](#)/[Project Moonboot](#) – Mountain View, CA   **Q3 2023 – Q2 2024**
- Engineered, fabricated and shipped custom components for a PCBA-integration of a military-grade IMU/geo-positioning instrument in a mechatronic hardware project [Street View for mountain bike trails].
- Sourced and designed a specialized-integration for a custom, milligram-scale lithium-ion battery cell from an overseas manufacturer for a consumer hardware product's manufacturing scale-up.

[Circuit Case Engineering](#) – San Francisco, CA   **Q2 2022 – Q1 2023**
- Engineered components, programmed CNC machines, and delivered 1200+ units of 40 unique assemblies, resulting in over $720,000 of revenue in projects with customers including: [Velo3D](#), [Neptune Medical](#), and [BD](#).

Design Engineer [RedyRef Interactive Kiosks](#) – Riverdale, NJ   **Q3 2016 – Q3 2018**
- Engineered kiosk system integrations, designed product enclosures, and facilitated manufacturing from concept to delivery for client projects: [Wendy's](#), [Micros/Oracle](#), [AT&T](#), [American Well](#), and [Nebraska State Fair](#).

EDUCATION

California Institute of Technology
Pasadena, CA (2018 – 2020)
Applied Physics/Materials Science

ArtCenter College of Design
Pasadena, CA (2018 – 2020)
Product Design

SKILLS

Creative & Technical: UI/UX Design, Rapid Prototyping, Front-End Development (TypeScript/React/Next.js), Systems Architecture, Empathetic Design, User Research, Wireframing, Design Validation, HTML/CSS/JS, API Integration, Process Flows, Design for Accessibility Drawing, Mermaid.js, ERD Modeling, Sequence Diagraming

Professional: Cross-functional Collaboration, Product Strategy, User-Centered Design, Design Documentation, Contract Development, Stakeholder Management, Technical Communication, Community Building, Product Implementation, Design for Production