

PRATHAM SHAH

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PROFESSIONAL SUMMARY

Software developer and Computer Programming & Analysis student who designs, builds, and ships full-stack systems end to end. Independently architected and monetized a production browser-automation platform — a Manifest V3 Chrome extension paired with a Node.js backend — spanning GraphQL API integration, resilient polling with rate-limit and backoff control, token-based authentication, and a Firestore-backed licensing server. Focused on backend reliability and turning real engineering work into a shipped, monetized product.

TECHNICAL SKILLS

Languages: JavaScript (ES Modules), Python, Java, C++, C#, SQL

Backend & APIs: Node.js, Express, WebSockets (ws), GraphQL, REST, HTML/CSS, SQL, Entity Framework, LINQ

Cloud & Infrastructure: AWS (EC2), Railway, Firebase / Firestore

Browser & Tools: Chrome Extensions (Manifest V3), Git, GitHub, Visual Studio, VS Code

PROJECTS

Nova — Job Application Automation Platform 2024 – Present

Founder & Lead Developer · C++, Python, JavaScript / Node.js · Chrome Extension (MV3) + Cloud Backend

- Designed and built a hybrid platform — a Manifest V3 Chrome extension plus a Node.js backend — that automates multi-step job-application workflows on Amazon's hiring platform; iterated across 13+ versions over ~6 months and scaled to a base of paying licensed users.
- Analyzed and integrated with the platform's **GraphQL API** (replacing brittle UI scraping), then drove the site's own single-page app to fire the create-application request, with an idempotent direct-POST fallback guarded by single-flight de-duplication to prevent duplicate submissions.
- Engineered a resilient polling engine: parallel ~1s targeted polls with jitter, **exponential backoff (capped) on consecutive failures**, and explicit handling of auth (401/403) and rate-limit (419/429) responses to stay within the platform's WAF limits — reducing new-listing detection to roughly one GraphQL round-trip (near real-time).
- Implemented token/session authentication that reads rotating access tokens from cookies with short-lived caching and automatic invalidation on 401, plus connection pooling (keep-alive) and a concurrency-limited dispatcher with retries and time-bounded dedup.
- Built the original desktop licensing layer in **C++**, locking the software to each machine via a hardware ID — the motherboard serial read through WMI, hashed with the license key using the Windows CryptoAPI — later superseded by a cloud license server.
- Built that license server (Node.js / Express on Railway, Firestore) with device fingerprinting, an admin web console, soft install caps with automatic aging, and per-device block / pause / revoke controls; owned the full product lifecycle from architecture and deployment to pricing, onboarding, and support, with revenue funding an academic semester.

EDUCATION

Computer Programming and Analysis

London, Canada

Fanshawe College

September 2023 – Present

- Object-oriented programming across Java, C++, and C#, with Python scripting and web technologies (JavaScript, HTML/CSS), emphasizing structured software architecture and design patterns.
- Designed database-driven applications with SQL and .NET, and built collaborative team projects involving data structures, algorithm analysis, and Git-based version control.

EXPERIENCE

Walmart

London, Canada

Digital Fulfillment Associate (Apr 2025 – Present) · Overnight Associate (Sep 2023 – Apr 2025)

- Process and fulfill high-volume online and BOPIS orders against strict SLA targets, consistently exceeding KPIs for pick rate, accuracy, and on-time fulfillment while meeting audit and staging standards.
- Use RF scanners and inventory-management systems to reconcile stock discrepancies and maintain real-time data integrity, coordinating across front-end, backroom, and customer-service teams; previously ran overnight stocking and proposed workflow improvements that streamlined the fulfillment area.

PC Financial

London, Canada

Sales Representative

January 2025 – June 2025

- Achieved top-tier monthly sales targets in retail banking, conducting needs-based assessments to match customers with credit products while maintaining high approval accuracy and regulatory compliance.