RYAN ASTAPHAN

Full-Stack Software Engineer

(954) 861 0420 • ryanastaphan@gmail.com • Fort Lauderdale, FL • Remote
linkedin.com/in/ryan-astaphan-6697b727

Professional Summary

Full-stack software engineer with 5 years of experience building production software in C#/.NET and TypeScript/React. Sole engineer of a custom auto-scheduling engine that plans about 1,900 rides a day across about 250 vehicles in about 3 minutes, in production since mid-2026. Built a billing and forms pipeline that generates 20,000+ PDFs a month and saves about $350,000 a year in labor. Works across the whole product: data models, API design, back-end services, web and mobile front ends, and UX design in Figma.

Skills

Languages
C#, TypeScript (JavaScript)

Front-End & Mobile
React, Next.js, React Native, Expo
Tailwind CSS, ShadCN, Storybook

Back-End
.NET, Node.js, NestJS, REST APIs
Entity Framework Core, JWT

Cloud & DevOps
AWS (API Gateway, Cognito, Elastic Beanstalk, SNS, SQS, RDS)
Docker, GitHub Actions, Firebase

Databases & ORMs
PostgreSQL, MySQL, MongoDB
Firebase, Supabase, TypeORM

Testing, Tools & More
Jest, xUnit, Postman, Git, Jira, Figma
iText7, Stripe API, OOP, Functional Programming

Work Experience

Full-Stack Software Engineer September 2021 – Present
Hive Tech | Remote

Hive Tech owns MedRide Transportation, a non-emergency medical transportation (NEMT) company in Colorado. The role covers its scheduling, billing and platform software.

Auto-Scheduling Engine ("NorthStar") C#, .NET

- Designed and built, as the **sole engineer** over about 10 months, a custom C#/.NET engine that plans the company's full next-day schedule of pre-planned, advance-booked medical rides. In production with the company's schedulers since mid-2026.
- Plans about **1,900 rides a day across about 250 vehicles** in about **3 minutes** per solve, running millions of feasibility calculations.
- Automates next-day scheduling that a team of about 6 schedulers spends hours on each day, about **$168K a year in salary** (est.), and is projected to save about **$225K a year in empty miles** (est., planned figures at owner prices).
- Beat the scheduling team's own plans on total empty miles and on-clock time in an 11-day test on the same travel model: **10.9 vs. 12.0 empty miles per trip** and **75.3 vs. 78.4 on-clock minutes per trip**, while placing **99% of in-scope trips**.
- Architected a deterministic multi-pass pipeline: seeding of tight-window trips, route construction, then improvement passes (relocate and swap, tail exchange, block swaps, closing short shifts, region alignment).
- Built one shared feasibility checker used by every pass, so each run is audited against all hard rules and must report zero violations.
- Modeled real NEMT constraints: pickup and drop-off pairs, wheelchair and ambulatory riders on a mixed fleet of sedans, SUVs and vans, vehicle-feature rules, pickup and drop-off time windows, driver hours-of-service limits, carpooling, escorts, and will-call returns.
- Computed drive times from time-of-day travel matrices built with OSRM.
- Evaluated off-the-shelf solvers first, then built the custom engine, which performed far better.

- Now extending the engine into auto-dispatching (in progress).

Billing & Forms Automation Transport software API, Google Sheets, iText7

- Engineered an automated billing pipeline that generates the government forms required to bill every Medicaid and Medicare trip: **20,000+ PDF documents a month**.
- Integrated the transport software's API and Google Sheets as data sources and generated the filled PDFs with iText7.
- Automated about 64 hours of manual paperwork a day (**8 employees at 8 hours each**), saving about **$350,000 a year in labor**.

Platform Architecture & Back End C#, .NET, AWS, Postman

- Wrote the data models for every core entity of the company's platform. They are still its foundation today.
- Laid the API design foundation with C#/.NET and Postman for the engineering team to build on.
- Designed and deployed scalable .NET microservices on AWS in an event-driven architecture (API Gateway, Cognito, Elastic Beanstalk, SNS, SQS, RDS) to handle core business logic. Teammates have since taken over AWS operations.
- Developed real-time GPS tracking for the driver-facing mobile app, with a cost-effective location-update strategy that works within service-tier limits.

Product Design & Proofs of Concept Figma, React, Next.js, Expo, React Native, Firebase

- Joined as the sole developer of a new department, charged with proving out software to replace the company's incumbent dispatch platform.
- Researched the incumbent product and met with dispatchers and staff to learn their workflows.
- Designed the replacement alone in Figma: wireframes, visual design and interaction.
- Built the proof-of-concept web app (React, Next.js) and driver app (Expo, React Native) on Firebase (authentication, document storage, NoSQL database).
- The proofs of concept succeeded, and the owner funded a full engineering team. The current web and mobile apps follow their design.
- Mentored new engineers and wrote the foundational documentation for the team's applications, so new hires could contribute to the codebase sooner.

Projects

Radiant RT Symptom Tracker – Mobile App (Pilot)

- Sole developer. Implemented the founder's concept as a cross-platform mobile app for people going through radiation therapy: a daily symptom check-in, week-by-week guides matched to the treatment timeline, and a library of guided audio sessions. Running as a pilot, not a public store release.
- **Technologies:** TypeScript, React Native, Expo

SEO Tree – SaaS for SEO Professionals (Work in Progress)

- Building a SaaS platform of organizational and analytics tools for SEO professionals and agencies. Built Stripe subscription billing (pricing tiers, 14-day trials, pro-rated upgrades, cancellation) and a custom layout engine that renders an interactive visual sitemap.
- **Technologies:** TypeScript, React, Next.js, Supabase, Stripe API

Education & Certifications

Bachelor of Arts – Graduated Cum Laude

University of Florida, Gainesville, FL 2006 – 2008

NestJS Authentication and Authorization – NestJS (July 2024)
NestJS Fundamentals – NestJS (May 2024)
API Prototyping Learning Path – Postman (May 2023)