PATRICK PUGA

SENIOR SOFTWARE ENGINEER

CONTACT

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EDUCATION

The University of Texas at El Paso
El Paso, TX

M.S. and B.S. in Electrical Engineering

SKILLS

Programming Languages

JavaScript · TypeScript · Python · SQL · GraphQL

Libraries & Frameworks

React · React Native · Node.js · Apollo Client · Redux · PostgreSQL · Redis · Flask · Gatsby · CSS/Sass

Tools & Platforms

AWS · Docker · Git & GitHub · CI/CD Pipelines (GitHub Actions) · LaunchDarkly (feature flagging) · New Relic (monitoring & observability) · React DevTools & Profiler · Apollo Client DevTools · Jira · Confluence · Contentful (CMS)

PROJECTS & CRYPTO EXPERIENCE

CropCoin (Ethereum-based ERC-20 demo token, Nutrien internal hackathon) – Created an ERC-20 token during a Nutrien Digital hackathon, deploying it to a test network and integrating it into Coinbase Wallet to simulate blockchain-based transactions and token management.

Baeza Engineering Website – Designed and developed a responsive, production-quality company website using React, modern CSS, and SEO best practices, delivering a polished digital presence for the client.

PROFILE

Senior frontend engineer with expertise in React, TypeScript, and GraphQL, building scalable component systems and high-availability user interfaces. Adept at optimizing critical flows, hardening reliability, and ensuring accessibility across platforms.

RELEVANT EXPERIENCE

Senior Software Engineer | Nutrien Ag Solutions | Feb 2021 - Present

React / TypeScript (web), React Native (mobile), GraphQL, performance optimization, resilient architecture

- **Reduced render time and improved maintainability** for large, dynamic datasets by migrating core data tables (RecipesTable, ProductHistory) from Table V1 to V2 and minimizing re-renders.
- **Increased reliability in critical user paths** by hardening entitlement and download flows with retry logic, real-time error handling, and secure auth checks.
- **Improved release stability and cross-platform parity** by rolling out major features (e.g., Recipes V2) behind feature flags for staged deployment across web, tablet, and mobile.
- **Enhanced UI clarity and decision speed** in dense interfaces by delivering responsive patterns for product differentiation and data readability.
- **Accelerated search performance** with partial word matching, throttled requests, and query optimization for large datasets.
- **Delivered consistent UX and performance** across iOS, Android, and web by collaborating closely with product and design on data-heavy, multi-platform UIs.
- **Improved responsiveness of complex, real-time UI components** as part of a digital-wide performance initiative, collaborating with multiple engineers to diagnose rendering and state update bottlenecks, implement targeted optimizations, and establish performance baselines for future features.

Senior Software Developer | Kiliuda Consulting LLC | 2017 - 2021

React, Node.js, Redux, PostgreSQL, Apache Solr, microservices, mobile development

- **Led frontend development** of a new SaaS platform replacing a legacy DOJ application, enabling real-time event deconfliction and coordination for law enforcement agencies.
- **Increased scalability and maintainability** by architecting microservices to replace monolithic systems, improving data sharing across multiple applications.
- **Accelerated critical field operations** by developing an iOS proof-of-concept mobile app for on-the-go deconfliction, demonstrating rapid delivery of production-ready mobile features.
- **Reduced geospatial search latency** by implementing Apache Solr for location queries, significantly outperforming the prior SQL-based approach.
- **Collaborated with cross-functional teams** to design, build, and deploy features that met strict performance, security, and reliability requirements.

Software Engineer | Rolling Bay LLC | 2014 - 2017

React, Java, .NET Framework (C#), SQL, microservices, legacy modernization

- **Modernized legacy DEA applications** by introducing React-based UI components and improving maintainability while preserving mission-critical functionality.
- **Accelerated system modernization** by designing and implementing a microservice architecture to replace monolithic systems, increasing scalability and reducing deployment risk.
- **Enhanced backend performance** by developing optimized services in C#/.NET, reducing load on legacy SQL-based workflows.
- **Improved onboarding efficiency** by creating technical documentation and training materials, enabling faster ramp-up for new developers.