Ryan Floyd

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OBJECTIVE   Provide technical leadership to a software development team to build world-class online web services. Exercise best practices and engineering processes to meet rigorous deadlines and quality assurance measurements. I'm a self-motivated, creative and enthusiastic professional with excellent communication abilities who excels at leading engineering teams.

EDUCATION   **University of Washington**
Masters of Science in Computer Science – Focus on Distributed Systems
University of Washington
Bachelor of Science in Computer Engineering with a Mathematics Minor

LANGUAGES TOOLS   Typescript, Node, React, NextJS, Prisma, Python, Django, Go, Tailwind, AWS, GCP, GKE, Kubernetes, Prometheus, Grafana, SQL, Postgres, Mongo, Redis, Elasticsearch

EXPERIENCE

Mothership	**Staff Software Engineer**	Austin, TX (remote) Apr 2023—Mar 2024

- LTL Transparency Initiative: Overhauled the dashboard to display richer rate details. Developed custom eligibility models to guarantee accuracy and purchasable conversion of quotes, significantly enhancing overall customer satisfaction and increase quote conversion
- Claim Insurance Integration: Seamlessly integrated a new insurance underwriter into the platform, streamlining the insurance claim process for users. This initiative markedly reduced the time and complexity involved in filing and managing insurance claims, enhancing user satisfaction.
- Automated Billing Adjustments: Developed and implemented a completely new approach to surface carrier rebills to customers. Integrated with a custom Intercom workflow to facilitate dispute resolution processes, thereby enhancing billing accuracy and efficiency. This system manages bills, disputes, handles charges and refunds, significantly reducing billing discrepancies and manual oversight.
- Codebase Modernization and Refactoring: Led a significant refactoring initiative to reorganize sprawling frontend code into structured NestJS modules. Utilized OpenAPI specifications to auto-generate client code, significantly boosting maintainability and developer efficiency.
- Frontend Packages and System Upgrades: Directed a comprehensive modernization effort, transitioning from an outdated CRACO setup to VITE, and upgraded Node.js from v14 to v20 and React from v16 to v18. These upgrades led to a dramatic reduction in build times, from approximately 4 minutes to 30 seconds, significantly enhancing development workflows and devX experience.
- Track Shipment Page Overhaul: Completely revamped the track shipment page, transitioning from a fragile Algolia search index, plagued by frequent crashes and lagging data, to a robust API that directly queries the database. This new system ensures the timely and accurate display of shipments and their status, bucketized for clarity, with custom indexes designed to keep execution times under 250ms.
- Geo Services Development: Spearheaded the creation of a new NestJS application with Prisma/Postgis to serve as the central hub for all geo-related data. Aggregate multiple sources of GIS related data to intelligent Geo models. This pivotal development enables teams across the organization to accurately geocode addresses and access crucial information on whether locations are residential, have limited access, or are distribution/warehouse centers.
- Launched the first features of Shipbot™, leveraging the Geo infrastructure. This innovation allows customers to be automatically informed if their shipment pickup or delivery locations are residential, limited access, or distribution centers, leading to a 40% reduction in rebills.
- Introduced an advanced scheduled delivery feature within Shipbot™, proactively informing customers when a scheduled delivery is required for residential locations. This feature significantly reduced service window changes, also known as shipment delays, by 25%.

CamperEdge.com   **Solo Entrepreneur**   Spokane, WA
July 2021—Present

- Launching coming spring 2024
- As an avid outdoor enthusiast, booking campsites at popular campgrounds is a dreadful experience on recreation.gov
- Built camperedge.com from the ground up. Backend is Django w/ Redis, Postgres. Hosted on AWS in secure VPC with self hosted NAT / VPN. Frontend is Next.js self hosted on Docker along with NodeJS for some simple APIs. Docker instance using Nginx as a L7 routing "load balancer" to direct requests to Frontend or Backend docker instances. Github actions build docker images and push to Amazon ECR
- All campground pages are server side generated (SSG) content for almost instant page load, perfect for SEO
- Consumed data from ridb.recreation.gov DB (actually a set of semi structured CSVs), ran multiple data processing Python scripts (NLP, Beautiful Soup to clean HTML) and restructured as relational data and stored in Postgres
- Mapbox integration with their beta Places API. Restricted to limited set of place types. Loads in geojson feature collections with custom JS for tooltip style place marker
- Stripe checkout.js integration for payment processing. Callbacks on success / error state handling

Ridecell   **Senior Tech Lead**   San Francisco, CA (remote)
Oct 2016—Mar 2023

- Implemented new Promotions / Coupons system to drive customer growth. Built a variety of redemption methodologies, such as flat coupons, percentage discounts and more complicated reward style coupons (take X trips and get Y reward, with criteria requirements such as minimum trip cost and within Z days, etc). Allowed for marketing managers to create Promotion with max budgets, specific shared coupon codes or customized user coupon codes which only that user can activate). Built dashboard to observe Promotion status (% of budget consumed, number of activations, time remaining, etc)
- Rearchitected our django codebase into an organized structure which allows for hundreds of engineers to contribute with ease. Wrote a series of Python scripts to automate code refactoring and managing change of Django models. These scripts allowed for development to progress on our main branch, The outcome of this work has saved the company hundreds of developer hours every year since.
- Tackled our django codebase update from Python 2 to Python 3
- Performance tuned our django APIs and SQL queries. Came up with novel solution to optimize SQL queries for an API searching for rental data. Django was joining dozens of tables and causing SQL to perform sequential scans on millions of rows. Rewrote the django's internal join logic to use subqueries. Created custom composite trigram indexes for fields being used for filtering. I was able to reduce the time to execute the query from hundreds of seconds to a less than a second. Adopted this subquery work and applied to other APIs performing searches on customer data and payment data.
- Handled multiple security incidents (systems were never breached, privileged accounts were comprised). Quickly implemented 2FA Trusted Device to prevent future credential stuffing attacks. Also implemented periodic password reset feature to mandate users change passwords every X days. Handled Pentest engagement and resolutions for issues found.
- Built Go microservice to evaluate risk of a transaction from customer's previous interactions based on specific business criteria. Multi-tenant (data isolation) to support 30+ deployments of Ridecell platform. Running on Kubernetes in docker containers.
- Refactor place search using Google, HERE and internal locations datastore. Vastly improved performance, eliminated bugs by implementing unit tests and fixed various cache inefficiencies (hit ratio, data pollution, N scan deletions, improper cache invalidation)
- Re-vamped payments backend code to support Stripe and Braintree payment providers. Internalization (i18n) and Localization (l10n) support, such as language translation framework, currencies, units (km vs miles, gallons vs liters) for deployments in Spain, Sweden, India, France and Poland. Currency formatting

Heyl Group at Keller Williams **Director of Technology** Austin, TX May 2016—Oct 2016

- Redesigned and completed new custom phoneanimal.com website
- Django backend with Twitter Bootstrap V4, Knockout frontend
- User signup flow including oAuth login, Paypal Braintree integration, and dashboard view
- Sourced, interviewed and hire 3 offshore engineers (budget restrictions)
- AWS Elastic Beanstalk, RDS postgres, elasticache all on a VPC with openvpn
- Agile development process with 1 week sprints using Trello
- Work with business stakeholders to gather requirements, brainstorm features, organize our sprint schedule and execute
- TDD enforced. Frontend code coverage 90%, backend at 85%

Tech Lead Austin, TX

TheZebra.com **Senior Software Developer** October 2013—May 2016

- Led team of 5 full stack developers (4 in Austin office and 1 offshore)
- Built a new lead distribution platform in Go (GoLang), architected the service to be built iteratively; we launched the first functional phase in 3 weeks. Launched the completed project 1 week ahead of schedule.
- Provide technical guidance for all features and ensure features are fully spec'd and delivered on time
- Manage schedules and deliverables from offshore engineering team, high quality work is maintained
- Perform technical phone screens, interviews and hiring decisions. Grown the team from 3 engineers to 12 engineers
- Mentor developers, always allowing them to strengthen and extend their skillset
- MVVM architecture, backend built on Django (Python) with ElasticSearch, Memcached, and Celery. Frontend built with Jquery, Bootstrap, SASS, and Knockout.js
- ReactJS with Node for mobile site, Varnish caches/routes traffic between desktop and mobile sites
- Implemented many 3rd party Lead aggregator clients, primary source of revenue and directly contributes to 30% MoM growth
- Redesigned and implemented backend architecture from ElasticSearch to Memcached to increase throughput, improve performance by 300% and decrease costs by 4x
- Created dedicated mobile website with emphasis on simplicity, performance and attempt to future proof by building on ReactJS with hopes to compile down to native components on Android/iOS
- Implemented AWS autoscaling for our Django Celery workers. Publish rabbitmq queue length to CloudWatch, autoscale group responds accordingly
- Built custom CRM solution to keep track of Customers, Policies, renewal dates and audit history for sold policies
- Agile development, 2 week sprints. Participate in poker planning, technical debt reduction days and creation of technical design documents
- Built live call queue monitoring to inform sale agents when callers are in queue, informing them how long they have been on hold, and how many calls are active
- Integrated with Stripe to take agency fee payments
- Handle all DevOps work, responsible for site reliability and performance. Hosted on AWS with 40 EC2 instances, S3 for storage, CloudFront CDN, ElastiCache, Route 53, and ELBs
- Won March 2014 Hackathon, where I built a Chrome Extension to simultaneously notify everyone when a policy is sold. Has the ability to play a song chosen by the sales agent and a custom avatar. Built with Node.js, websockets and Oauth for Google Apps authentication

Microsoft Corporation   **Service Engineer II**   Redmond, WA
August 2007—March 2013

- **Promoted 3 times in 6 years all within the Office Division**
- Primary technical operations engineer for Office Web Applications and previously for Office.com
- Developing automation tools in C# and Powershell for Office Services on Azure
- Managed and trained a team of vendors to execute RFCs against PPE and Production environments
- Provide projected fiscal year budgets for operational and capital costs to finance analysts
- Ensure Office Web Apps and associated online services meet demanding 99.9% uptime goals
- Constantly work with product team and business stakeholders to ensure operational entrance criteria, bug fixes and deployment schedules
- Performed evidence collection for FISMA/ISO27000 certification requirements
- Designed physical architecture for Office.com and deployed over 500 servers in datacenters worldwide
- Automated the Office.com deployment process to reduce human error and decrease deployment time
- Manage over 2500 machines in 6 datacenters worldwide and ensure environments are online 24x7x365

Intel Corporation   **DEG Validation Engineer Co-Op**   Hudson (Boston), MA
January—September 2005

- Validated next generation multi-core enterprise processors by creating tests that found flaws and bugs with a diverse team of validation engineers.
- Designed programs to collect and display statistics informing other engineers about critical test coverage and validation progress.

PERSONAL   Known as a reliable, hard-working employee who is willing to take on additional responsibility. I also enjoy playing a variety of sports such as soccer, basketball, tennis and golf.