William Bratz

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SUMMARY

- 7+ years enterprise .NET development experience, .Net Core, .Net Framework, .Net Standard.
- 7+ years developing scalable, robust RESTful API's.
- 7+ years Javascript development using JQuery, React, TypeScript.
- 5+ years experience developing enterprise microservices.
- 3+ years React development.
- 9+ years experience developing in SQL.
- 4+ years experience developing cloud services in Azure, and AWS.

PROFESSIONAL EXPERIENCE

Carvana **12/2020 - Present**
Software Engineer II
Phoenix, AZ (Remote)

Carvana LLC., Provides customers a unique car buying experience completely online and is the second largest used car retailer in the United States.

Engineer within the Verifications platform, responsibilities include research and requirement gathering, architecting solutions for projects within our domain and spanning multiple teams, implementation, testing, documentation, releasing through multiple environments into production, post production support and monitoring. We utilize a microservice architecture with a nationwide distributed system in Azure spanning three regions. Our general tech stack is Azure Kubernetes, Azure SQL, CosmosDB, Azure service bus, Kafka, .net core.

Projects

Application Right Sizing: *Initiative to evaluate current application resource utilization, and find ways to improve. An example of the result of the effort is memory usage in one application went from over 1GB constant 1.5GB max to never going above 243MB which translates to going from 60% - 80% total memory usage to less than 10%. Ultimately we were able to decrease the TShirt size of many of our applications, lowering our monthly running costs significantly.*

Red to Green (R2G): *Top company objective spanning multiple teams with the goal of converting red customers (customer that initiated the car buying process) to green (a customer who has completed the process) by utilizing automation to satisfy requirements. Saving 38,000 hours of customer service representative time per year. Additionally increased overall sales by an estimated 5% equating to $230,000,000 in additional revenue per year.*

- Implemented microservice responsible for handling coordination of multi step operations related to the verification process.
- Collaborated across multiple teams to coordinate deployments, features, and design solutions.
- Developed fault tolerant solutions for handling multi step executions.
- Developed solutions to maximize code reuse and enforce standards in code.

- Implemented structured logging, into splunk with serilog, utilizing correlation Ids to track calls across multiple systems and context to enrich logs with useful information.
- Migrated microservice to Azure Kubernetes utilizing helm to control t-shirt size and min/max replicas and autoscaling, a team first.
- Created technical documentation, for engineer reference (class/sequence diagrams) and for QA testing.

CoBuyer: *Top company initiative to re-architect existing applications to allow customers to buy a car using a co buyer. Increasing sales by 7% and $613,000,000 in additional annual revenue.*

- Researched and documented existing workflow spanning multiple services.
- Made design recommendations based on research.
- Assisted more junior developers in the ideation process and implementation.
- Hosted “how we work” sessions to get unfamiliar developers more familiar with the process and dependencies.
- Implemented solutions across multiple services within our domain.
- Updated technical documentation.
- Wrote unit tests to provide coverage for new code.

Deadline Approaching: *Automation of customer notification that the deadline to supply documentation is less than 4 hours away. The goal of this project was to minimize customer service representative calls to customers to remind them to supply documentation. Automating the process, saving the company $5,000,000 in man-hours a year.*

- Researched and documented current state and dependencies to understand existing workflow.
- Architected solution to be integrated into multiple microservices within our domain.
- Collaborated with business partners and cross team engineers on design decisions.
- Implemented solution.
- Tracked metrics to fine tune logic and increase cost savings.

Sunny’s Light **8/2019 - Present**

Software Engineer
Hendersonville, TN
Nonprofit providing financial support to families who have lost a child through stillbirth.

SunnysLight.org: *Web application home page for the Sunny’s Light non-profit. The web application provides information on the organization, ways to donate, and information to receive support.*

- Designed, developed, deployed, and maintained Web application.
- Utilized React to build a responsive modern web app utilizing components, hooks, modals, toast messages.
- Developed custom stripe payment integration providing a seamless and secure donation process.
- Developed 3rd party API to handle stripe payment processing, receipt generation, and user logging.
- Integrated Google Analytics to monitor performance, and user patterns to make informed future decisions, and gauge marketing value.
- Technologies Used: React, Azure App Services, Github, Azure DevOps, Docker, Azure SQL, .NET Core, Docker.

CoStar Group (Smith Travel Research) **3/2016 - 12/2020**

Software Engineer
Hendersonville, TN

CoStar Group is the leading provider of analytics for the commercial real estate and multifamily industries, as well as benchmarking data for the global hospitality industry. Originally employed by STR (Smith Travel Research) , STR was acquired by CoStar in October of 2019. Our tech stack utilized an onprem data center, with SQL Server, .net core, Javascript (Ember, JQuery, React), and RabbitMQ.

Projects

STR Data integration: *With the CoStar acquisition of Smith Travel Research (STR) as an STR employee I was brought onto a CoStar team to assist in integrating STR data with CoStar Suite. CoStar's primary subscription product that received over 1 million searches a day.*

- Part of a 3-person team collaborating with frontend teams to implement integration of STR's global, hospitality, analytics, and benchmarking data into CoStar Suite.
- Developed report generation platform using AWS Lambda and AWS Step Functions.
- Developed multiple modules for language translation and currency conversion utilizing factory, strategy, and command design patterns.
- Integrated new benchmarking and analytic data into existing tables then exposed data through entity-based endpoints to serve front end needs

Instant Insights: *The goal of this project is to rewrite and aggregate multiple existing legacy services into a single user facing service allowing property managers to see at a glance metrics for the properties they manage.*

- Project Tech Lead.
- Designed and developed a microservice architecture using REST APIs in .net core to calculate and serve data based on user selections, as input by our front end React website.
- Broke apart monolithic services and combined multiple related services into a series of microservices that can be reused throughout the organization.
- Developed front end components including drop downs, modals, forms, menus, graphs, charts and tables with variable columns and rows.
- Technologies used: React, Javascript, Typescript, Redux, Chart JS, Swagger. Net Core, Git.

dStar: *Is a digital version of STR's most lucrative product, the S.T.A.R. report. The scope of this project was to take the current STAR report, which was generated via ad hoc batch job, then emailed or faxed to the customer, and create an online platform for ordering, viewing, and managing STAR reports.*

- Implemented multiple front end components using javascript, with graphs and charts using charts.js
- Worked with UX designers to design and implement front end components modernizing the look and feel, resulting in a better user experience.
- Implemented user permission management, with tiers of access, so super users could create other users and manage their permissions.
- Implemented back end service to quickly retrieve and process data resulting in previously unachieved report generation time.

TECHNICAL SKILLS

Platforms: Windows, Ubuntu, Mac OS.
Software: Visual Studio, VS Code, Azure.
Languages: C#, T-SQL, Javascript, Typescript, Python, Java.
Technologies: .NET Core, .NET Framework, React, SQL Server.

Personal Projects

Neverending Story Pointer : https://www.NeverEndingStoryPointer.com

A pointing poker application for software development teams, built using a gRPC service, and Blazor WASM, utilizing the MudBlazor component library. This application allows agile software development teams to point stories anonymously, keep history of their pointing session, as well as set a timer to timebox their pointing sessions.

EDUCATION

Arizona State University **7/2022 - Present**

B.S Software Engineering

Volunteer State Community College **12/2020 - 5/2022**

A.A.S Computer Programming

- Phi Theta Kappa
- Spring 2021 Dean’s List.
- Summer 2021 Dean's List & Honor roll
- Fall 2021 Dean's List & Honor roll
- Spring 2022 Merit list