

# Joshua Osenbaugh

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## Summary

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Senior Backend Software Engineer with experience architecting scalable APIs, event-sourced systems, and real-time distributed applications. Proven background leading backend initiatives processing millions of events per day and deploying low-latency machine learning systems with sub-10ms inference in production. Experienced in RESTful API design, MySQL and MSSQL data modeling, AWS infrastructure, Docker-based deployments, and CI/CD automation. Strong track record of owning architectural decisions, collaborating with product stakeholders, and delivering reliable, high-performance backend systems.

## Experience

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### PhoneBurner | Remote

#### Senior Backend Software Engineer | 07/2021 - Present

- Architected and solely owned the design and production deployment of a real-time RNN classification system using TensorFlow (Python for training, C for production inference), delivering sub-10ms latency predictions on streaming data in AWS.
- Led backend architecture for three event-sourced systems using EventSauce and MySQL, processing millions of events per day across outbound dialing and phone number lifecycle management platforms.
- Designed and built 20+ RESTful HAL-based APIs serving internal and external customers, implementing hypermedia-driven discoverability and scalable MySQL-backed persistence layers.
- Served as technical lead and primary backend engineer across multiple initiatives, acting as the main engineering contact for product stakeholders and guiding architectural decisions through delivery.
- Architected and implemented telephony integrations via Twilio and direct SIP integrations with Asterisk and FreeSWITCH, working directly with major telecom providers.
- Built and maintained Dockerized services deployed in AWS, implementing CI/CD pipelines using GitHub Actions to support continuous delivery.
- Enforced high engineering standards through unit, integration, and behavioral testing across distributed backend systems.

### Shared Services | Northwood, OH

#### Software Engineer | 08/2018 - 07/2021

- Designed and implemented customer-facing and internal RESTful APIs using PHP (Symfony) and Microsoft SQL Server, supporting mid-scale ISP systems serving the Toledo metropolitan area.
- Contributed to the architectural design and modernization of backend systems, including greenfield development and refactoring of legacy applications.
- Built and maintained automated provisioning systems for high-speed data and VoIP modem deployments, supporting fully automated service activation workflows.
- Introduced and implemented CI/CD pipelines using Bamboo, containerizing applications with Docker and deploying to on-premise infrastructure.
- Participated in a 24/7 on-call rotation supporting production systems, troubleshooting critical service and provisioning issues affecting city-scale customers.
- Mentored junior engineers and served as a technical escalation point for complex backend and infrastructure issues.
- Collaborated across engineering teams to deliver API-driven service management and deployment solutions.

### The William Fall Group | Toledo, OH

#### VB.Net Programmer | 02/2018 - 08/2018

- Developed and maintained VB.Net web applications backed by Microsoft SQL Server for internal enterprise systems.
- Designed database queries and implemented backend business logic to support reporting and operational workflows.
- Maintained and updated corporate web assets using HTML and CSS.
- Provided technical support and troubleshooting for internal software systems.

### Toledo Smart Bilingual Elementary | Toledo, OH

#### After School Teacher | 08/2013 - 02/2018

- Taught foundational programming concepts using Scratch and LEGO Mindstorms robotics kits.
- Developed structured lesson plans introducing logic, problem-solving, and basic software development principles.

## **Skills**

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Python, C, Tensorflow, PHP, Javascript, Typescript, HTML, CSS, MSSQL, MYSQL, Distributed System Design, Telephony, Event Sourcing, Middleware, API design, Frameworkless platform architecture, Real-time communication via Server-Sent Events, ML low latency systems design, Machine Learning

## **Education**

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The University of Toledo | Toledo, OH  
Computer Science Engineering and Technology | 05/2018