Piyush Rao

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🔗 LinkedIn | GitHub | Portfolio

Senior Full-Stack .NET Developer

.NET Core | Angular | SQL | Cloud | Microservices | Enterprise Applications

Professional Summary

Full-stack software developer with 8+ years of experience building and modernizing enterprise web applications for government and large-scale organizations. Expertise in .NET Core, Angular, SQL, and cloud platforms (Azure and AWS), with a strong focus on secure, scalable, and high-performance solutions. Experienced in technical leadership, microservices architecture, CI/CD pipelines, and delivering user-centric applications in production environments.

Education

Master of Science (MS): Computer Engineering   **Jan 2018**
Stevens Institute of Technology
GPA: 3.7

Bachelor of Engineering (BE): Electronics Engineering   **Aug 2016**
Mumbai University
CGPA: 7.5

Professional Certification

- Harvard Business School Online – Entrepreneurship in Developing Economies Certification.
- Amazon Certified AWS Associate Developer (Credentials: 624ZZT4KJN4E1ZC4)
- Graduate Certification (Minors) in Software Design for Embedded and Info Systems from Stevens Institute of Technology.
- Graduate Certification (Minors) in Real-time Embedded Systems from Stevens Institute of Technology.

Technical Skills

Programming Languages: C#, JavaScript, Typescript, Python, Java
Frontend: Angular (2+, recent versions 14–19), AngularJS, React, HTML5, CSS3, Bootstrap, Angular Material, jQuery, Razor, Blazor, Figma
Backend: .NET Core (3.1+, recent versions 7–9), ASP.NET MVC, Web API, Entity Framework Core, NHibernate, Node
Databases: SQL Server, Oracle, PostgreSQL, MongoDB, DynamoDB, MySQL
Cloud and DevOps: AWS, Azure, GCP, Docker, CI/CD Pipelines
Reporting: Power Bi, SSRS, Crystal Reports, Tableau, MS Excel, MS PowerPoint
Testing: N-Unit, MS Test, Karma, Jasmine
Version Control and PM Tools: JIRA, VSTS, Team Foundation Server (TFS), Git, GitHub, Azure DevOps, ServiceNow
Tools: Visual Studio, VS Code, SSMS, Power Bi, Swagger, SharePoint, SQL Profiler, JMeter, Postman, Fiddler, Erwin
Methodology: Agile (Scrum / Kanban), Traditional Waterfall.
Foundational Technologies: Classic ASP, VB.NET, Web Forms, Kendo, PHP, WCF, WPF, WordPress, ADO.NET, LINQ To SQL, Unity 3D, MS Access, PowerShell, SSIS, MATLAB, MS Office, AJAX, JSON

Professional Experiences

Senior Software Developer
State of New Jersey – Department of Human Services – Hamilton, NJ
July 2023 - Present

- Lead development and modernization of **CAPES (Cash Assistance Program Eligibility System)** and **CARES (Child Care Automated Resource Eligibility System)**, two mission-critical platforms supporting statewide public assistance programs.
- Architected and owned the enterprise reporting ecosystem, embedding **Power BI Desktop and paginated reports** into Angular applications using **Azure Service Principal authentication**, resulting in **$118K/month in cost savings**.
- Designed a dynamic, parameter-driven reporting framework protected by a **secure gateway**, enforcing **role-based authorization,**

data isolation, and privacy controls across multiple business units.

- Architected secure, scalable authentication and authorization using **Azure AD, MSAL, Microsoft Graph API, JWT**, and **Angular AuthGuards**.
- Designed end-to-end **UI layouts and interaction flows using Figma**, translating wireframes and prototypes into responsive Angular components aligned with usability and accessibility standards.
- Led front-end development using **Angular 14** and drove migration to **Angular 19**, leveraging **Angular Signals** and optimized change detection to improve state management, performance, and UI responsiveness.
- Designed and developed **microservices-based applications** using **.NET 9**, Entity Framework Core, Swagger/OpenAPI, and AWS Secrets Manager.
- Developed complex **SQL Server stored procedures and functions** to support high-volume transactional and reporting workloads.
- Implemented **CI/CD pipelines and cloud deployments** using AWS, including environment configuration and security controls.
- Executed comprehensive testing across UI, API, and performance layers using **Karma, Jasmine, Postman, MS Test, and JMeter**, supporting Agile/Scrum delivery with Jira.

IT Lead – Application Developer (Tech Lead)
State of Ohio – Franklin County Children Services – Columbus, OH
July 2020 – July 2023

- Served as **Technical Lead** for two enterprise platforms—**Provider Monthly Reports** and the **Independent Living Project**—supporting foster care providers and internal YTS staff across the county.
- Led and mentored a cross-functional team of developers and a DBA, driving technical direction, code quality standards, and on-time delivery.
- Acted as primary technical point of contact between engineering teams, stakeholders, and business users.
- Defined application architecture and led development of **RESTful APIs** using **.NET Core 3.1–6**, integrating with SQL Server through **Entity Framework Core**.
- Championed the adoption of **Angular-based SPA architecture**, establishing frontend standards and modernizing legacy systems using Angular, Bootstrap, and component-driven design.
- Oversaw implementation of **secure authentication and authorization**, including JWT-based security and role-based access control for internal and external applications.
- Applied advanced Angular patterns such as **OnPush change detection, view encapsulation, lazy loading, cache management, and micro-frontend architecture** to improve performance and scalability.
- Guided development of reusable UI components using **Angular Material**, services, pipes, directives, and route guards.
- Designed and governed **microservices architectures**, leveraging **SAGA, API Gateway, and Factory patterns** to enable scalable, service-oriented solutions.
- Led technical reviews and delivered architecture and solution walkthroughs to **800+ providers and stakeholders**, driving adoption and alignment.
- Oversaw deployments and production operations on **IIS**, ensuring stability, performance, and rapid issue resolution.
- Integrated enterprise and third-party services including **Swagger/OpenAPI, MSAL, Microsoft Graph API, Power BI**, and JWT-based libraries.
- Directed CI/CD pipelines, release management, and performance monitoring using **Azure DevOps**, ensuring reliable and repeatable deployments.

Full Stack .NET Developer
Corteva Agriscience (Dow/Dupont/Pioneer) – Des Moines, IA / Remote
April 2020 – July 2020

- Contributed to the design and delivery of the **Program Portal**, a high-velocity sales and invoicing platform integrating legacy **MOW** and **PAW** applications to manage commercial rebate programs, accruals, and large-scale financial transactions.
- Delivered the application **from inception to production** in a fast-paced environment with strict deadlines, supporting sales representatives and marketing teams.
- Designed and implemented **RESTful APIs** using **ASP.NET Core 3.1** and **Entity Framework Core**, enabling seamless integration across systems.
- Built enterprise-grade front-end components using **Angular, TypeScript, HTML5, and CSS3**, adhering to Corteva branding and UI standards with **Angular Material**.
- Developed **DOA (Delegation of Authority) approval and routing logic** in C#, automating approval workflows based on sales thresholds.
- Designed and managed **SQL Server databases**, including tables, triggers, and stored procedures to support program management and financial accruals.
- Configured multiple application environments, including **DNS hostnames, SSL certificates, and secure URLs**, ensuring reliable and secure access.
- Worked with **Azure Data Lake and Cosmos DB**, integrating data pipelines from orchestration hubs to support reporting and

analytics use cases.

- Implemented **CI/CD pipelines and source control** using **Azure DevOps**, automating builds, deployments, and environment provisioning via **Azure ARM templates**.

(IT) Application Developer – Specialist
Nationwide Mutual Insurance – Columbus, OH
October 2018 – April 2020

- Supported and modernized a portfolio of **50+ enterprise applications** used by **40,000+ employees nationwide**, enabling asset management, billing, inventory, deployment, and break-fix operations.
- Played a key role in the **migration to SharePoint Online**, integrating enterprise workflows with **VB.NET and C#** applications.
- Designed and implemented an automated system to **clear SCCM PC rules**, improving security posture, reducing manual technician effort, and delivering **~$168K in annual cost savings**.
- Led the design and implementation of **dynamic, database-driven survey systems**, leveraging batch processing to collect large-scale user feedback via overnight email distribution.
- Recognized for successfully delivering the **"No Logon Survey"** initiative, a long-standing project stalled since 2013, improving operational visibility and stakeholder engagement.
- Developed and enhanced **microservices** using **.NET Core and Entity Framework Core**, improving application scalability and maintainability.
- Modernized legacy user interfaces by introducing **Angular 8**, significantly improving usability and application performance.
- Provided **L2 and L3 production support**, resolving incidents and service requests to ensure system stability and high user satisfaction.
- Assisted with application migrations and infrastructure modernization, leveraging **AWS and Docker** and troubleshooting deployment-related issues.
- Utilized **Visual Studio, VS Code, and SQL Server Management Studio** for development, debugging, and database operations.

Application Developer / Programmer
Marlabs LLC – Piscataway Township, NJ
February 2018 – October 2018

- Contributed to the delivery of a **pre-approved loan determination platform** for **Lloyds Bank**, supporting real-time credit decisioning and customer onboarding.
- Developed enterprise web applications using **ASP.NET MVC 5** with backend services built on **Web API 2.0**, implementing application security, CRUD operations, smoke testing, and unit testing.
- Led development of the **loan determination module**, enabling real-time evaluation of customer credit history, assets, income, and market factors including economic trends and real-estate conditions.
- Implemented data access layers using **Entity Framework 6.0** and **LINQ to SQL**, ensuring reliable and efficient data retrieval.
- Built **reactive onboarding forms** using **Angular 2**, integrated with **HTML5, CSS3, and Bootstrap** to deliver good user experience.
- Integrated **AWS SNS** for notification workflows and supported **database migration** initiatives.
- Participated in technical design discussions, onboarded new team members, and proposed enhancements to loan approval logic, including **interest-rate–driven decision rules**, with automated email notifications via **SMTP**.

Web Developer Intern
Ambiz Corp – Mumbai, India
May 2013 - September 2013

- Designed and developed a **responsive, user-friendly corporate website** to enhance brand presence and support sales initiatives using **HTML, CSS, JavaScript**, and modern JavaScript libraries.
- Built a **dynamic, JavaScript-based quotation and support request form**, improving lead capture accuracy and streamlining customer inquiries through data-driven form logic.

Leadership, Awards & Community Involvement

- Student member of **IEEE**, **Computer Society of India (CSI)**, and **E-Cell**.
- Served as **Publicity Head, IEEE DMCE (2014–2015)**, leading outreach and event communications.
- **1st Place**, National IEEE Project Presentation & Technical Debate (2015); featured in *IEEE Communique Magazine*.
- **Top 5 Finalist**, National IEEE Project Presentation (2016), IEEE-RAIT.
- Volunteer, **Forest Society of India (FSI)**, contributing to environmental cleanup initiatives at Sanjay Gandhi National Park, Mumbai.
- Volunteer, **URMI Foundation**, supporting community donations and outreach programs.