

# Piyush Rao

## Full-Stack .NET Developer

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[LinkedIn](#) | [GitHub](#) | [Portfolio](#)

## 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.

## 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 AuthGuards**.
- **Implemented and managed AWS cloud infrastructure**, utilizing EC2, S3, IAM, RDS, CloudWatch, and AWS Secrets Manager to support secure application hosting, data storage, access control, monitoring, and environment configuration.
- 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 – Des Moines, IA**

**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, aiding creation of a **SOA (Service Oriented Architecture)**.
- 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 and 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, MH, 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.

## **Education**

### **Master of Science: Computer Engineering**

**Jan 2018**

Stevens Institute of Technology

GPA: 3.7

### **Bachelor of Engineering: Electronics Engineering**

**Aug 2016**

University of Mumbai

CGPA: 7.5

## **Professional Certification**

- Harvard Business School Online – Entrepreneurship in Developing Economies Certification.
- Amazon Certified AWS Associate Developer (Credentials: 624ZT4KJN4E1ZC4)
- 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.

## **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.