Piyush Rao

Full-Stack .NET Developer
Specialized in Angular & UI/UX Designing

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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

Work Experiences

State of New Jersey – Department of Human Services – Hamilton, NJ   **July 2023 - Present**
Senior Software Developer (Full Stack .NET + Angular)

The New Jersey Department of Human Services (DHS) is a state government agency responsible for providing social services and support to residents of New Jersey. It is one of the largest departments within the state government and focuses on improving the quality of life for the state's most vulnerable populations. I am working on two major applications, CAPES (Cash Assistance Program Eligibility System) and CARES (Child Care Automated Resource Eligibility System), which are the backbone of this department.

- Architected and managed the entire reporting ecosystem, developing comprehensive Power BI Desktop and paginated reports. Integrated these reports seamlessly into an Angular UI using the PowerBi-client libraries and embedding APIs.
- Enhanced security of the reporting architecture by implementing Azure Active Directory (AD) Service Principal for access control, ensuring robust protection and data privacy.
- Designed a dynamic ecosystem around the reporting framework, creating adaptable forms that dynamically capture parameter values based on report requirements.
- Architected and developed robust security for both the apps integrating them with Azure AD using MSAL and JWT token-based authentication and Angular AuthGuard for authorization.
- Directly responsible for development of a rich, visually appealing, and user-friendly UI/UX for the application, focusing on intuitive design and seamless user interaction to enhance overall user experience.
- Developed the front end using Angular 14, implementing advanced UI designs and layout with Angular Material and Flexbox. Led the migration to Angular 17, optimizing performance and incorporating the latest features
- Designed and developed many microservices in a service-oriented architecture (SOA) with .NET 7 and .NET 8, Entity Framework, Swagger, AWS Secrets and more.
- Developed several complex stored procedures and functions in SQL Server DB.
- Used AWS for CI/CD pipelines and hosting our applications in various environments. Implemented with firewall rules.
- Did comprehensive testing and unit-testing on UI using Karma and Jasmine, MS Test and Postman in APIs, Jmeter for stress testing and manual integration testing.

State of Ohio – Franklin County Children Services – Columbus, OH   **July 2020- July 2023**
IT Lead – Application Developer

State of Ohio FCCS provides safety, opportunity, resources, and welfare to foster children. Provider Monthly Reports was the largest data driven application of FCCS which providers use to track medical, mental, dental, vision, vaccinations, legal, and every other detail. The Independent Living Project involves 2 apps for providers and internal YTS staff to help guide a foster child to choose a career path of their choice.

- Led a team of developers and DBAs to successfully complete two projects using cutting-edge technologies, ensuring timely and efficient delivery.
- Developed APIs utilizing .NET Core 3.1, .NET 5, and .NET 6, and integrated them with SQL databases using Entity Framework Core for robust data management.
- Designed and implemented rich user interfaces with Angular 15, overseeing the migration of applications from Angular 10 to Angular 16 for enhanced functionality and performance.
- Created and managed both internal and external-facing websites, implementing JWT token authentication to secure user data and access.
- Applied advanced concepts such as Change Detection OnPush strategy, view encapsulation, lazy loading, cache clearing,

and micro-frontend architecture to optimize application performance.

- Utilized Angular Material to design UI components, and developed essential features including services, pipes, directives, and auth guard.
- Developed microservices with various architectural patterns, including SAGA and API Gateway, and employed the Factory design pattern to create a service-oriented architecture (SOA).
- Integrated with various built-in and third-party libraries such as JWT Decode, Swagger, and PowerBI to extend functionality and enhance user experience.
- Built and optimized SQL Server databases by creating tables, views, triggers, functions, and complex stored procedures for efficient data management.
- Managed deployment and performance using Azure DevOps, overseeing deployment processes, performance tracking, traffic monitoring, and storage management.

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

Corteva Agriscience is the only major US based agriscience company with a rich history of over 200 years. The Program Portal project entailed integrating and enhancing existing MOW and PAW applications with a redesigned user interface. This web application enables the creation of new commercial rebate programs sponsored by Marketing for Sales Representatives. The Program Portal was developed as a high-velocity sales portal, managing programs and accruals to facilitate various operations. Designed specifically for Corteva, the portal functions as an invoicing and sales application, efficiently handling extensive crop data and substantial financial transactions.

- Developed and launched a project from inception in a fast-paced environment with strict deadlines.
- Configured multiple environments and URLs, including the setup of SSL certificates for secure access.
- Utilized Microsoft technologies such as ASP.NET Core 3.1, and Entity Framework Core to develop robust applications.
- Designed and implemented RESTful APIs using C# for seamless integration and functionality.
- Built enterprise-level applications with front-end technologies including HTML5, CSS3, TypeScript, and Angular.
- Designed layout pages following Corteva standards and branding, incorporating Angular Material for a consistent navigation experience.
- Developed DOA approval and routing rules using C# to streamline approval processes for product managers and sales representatives based on sales amounts.
- Managed database operations using SQL Server, including the creation of tables, triggers, and stored procedures for data management and accruals.
- Implemented CI/CD pipelines and source control using Azure DevOps to automate build and deployment processes

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

Nationwide Insurance is USA's one of largest insurance company. Developed and maintained a suite of applications (over 50) for asset management and scripting, supporting over 40,000 employees nationwide. These applications facilitated asset supply, break-fix services, billing, inventory management, VM & PC management, deployment, and assignment.

- Played a key role in the migration of SharePoint Online and integration with VB.NET and C# applications.
- Designed and implemented three dynamic surveys to collect customer feedback, utilizing batch processes to send emails overnight.
- Developed microservices using .NET Core and Entity Framework Core, enhancing their functionality and scalability.
- Utilized Visual Studio, VS Code, and MS SQL Server Manager for development and database management tasks.
- Modernized user interfaces for applications using Angular 8 to improve user experience and application performance.
- Provided L2 and L3 support, addressing incidents and service requests to ensure smooth operation and user satisfaction.
- Experimented with AWS and assisted in migrating applications to new servers, including setup, testing, and troubleshooting related issues.

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

Marlabs Inc. is a global technology services company offering a wide range of digital transformation solutions. At Marlabs, I received training in the latest Microsoft technologies, including .NET and SQL. As part of my role, I worked with Lloyds Bank as an implementation partner on their pre-approved loan determination project.

- Developed the project using ASP.NET MVC 5, with services created in WEB API 2.0, configured security, and conducted CRUD operations, smoke testing, and unit testing.
- Specialized in the loan determination module, enabling real-time assessment of a potential customer's credit history, visible assets, and salary; also considering current economy and real estate, car market environment.
- Implemented data access using ADO.NET Entity Framework 6.0 and LINQ to SQL.
- Developed reactive forms for loan applicant onboarding using Angular 2, integrated with HTML5, CSS3, and Bootstrap.
- Integrated AWS (SNS) for cloud services and assisted in database migration.
- Facilitated brainstorming sessions, onboarded new team members, and recommended additional modules for loan

approval determination depending on the Fed interest rate, and sent out emails using SMTP server.

Technical Skills

Programming Languages: C#, Python, Java, VB, C++.

Web Technologies: Angular (2-17), AngularJS, React (17,18) HTML5, CSS3, JavaScript, TypeScript, JSON, JQuery, Bootstrap (2-5), Razor, Blazor, .NET (4-8), .NET Core (2.1,3.0,3.1), ASP.NET MVC 5, WEB-API 2.0, Node.js, Kendo, PHP, VB.NET, WCF, WPF, Web Forms, Classic ASP, ADO.NET, LINQ to SQL, Entity Framework, EF Core, Hibernate, Unity 3D.

Database: MS SQL Server (2012-2019), Oracle, MySQL, MongoDB, DynamoDB, MS Access, T-SQL, Postgres.

Testing and Unit Testing Tools: N-Unit, MS Test, Karma, Jasmine, Postman, Swagger, Fiddler, Jmeter.

Cloud, Servers and Hosting: AWS, Azure, Docker, Jenkins, IIS (Internet Information Server) 7.0/6.0, Apache Tomcat 8.

Version Control and PM tools: VSTS, Git, GitHub, Team Foundation Server (TFS), Azure DevOps, MS Task Planner, Asana, ServiceNow, Bitbucket.

Methodology: Agile (Scrum / Kanban), Traditional Waterfall.

Tools and Software: Visual Studio, Visual Studio Code, Sql Server Management Studio (SSMS), SQL Profiler, Sharepoint, MS Office, MySQL workbench, Erwin, PowerBi Reports, Crystal Reports, SSIS, SSRS, WordPress, Plotly, Tableau, MATLAB, Powershell.

Other Skills: Team player, passionate leader, ability to work individually, good soft skills, quick learner, constantly evolving.

Certifications

- Amazon Certified AWS Associate Developer (2018)
- 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.

Academic and Co-Curricular Achievements

- Proud Student member of IEEE, CSI (Computer society of India), and E-Cell.
- Publicity Head of IEEE DMCE (2014-2015).
- 1st in National IEEE Project Presentation and Technical Debate 2015 (featured in IEEE Communique Magazine)
- In the top 5 contestants for National IEEE Project Presentation 2016 held by IEEE-RAIT.
- Volunteer for Forest Society of India (FSI), organized camps to clean up Sanjay Gandhi National Park Mumbai.
- Volunteer for URMI Foundation collected clothes from residents for donating them to underprivileged people.
- Black Belt in Japanese Karate from Sun Karate Club (Gold medal in sword fighting and kumite).
- Elementary degree in Indian Classical music with Mandolin, also very proficient in violin, flute, harmonium, and dholak.
- Dad never got me a drone so made one as my final year engineering project.