

Bharghava Kumar Purru

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PROFILE SUMMARY

Innovative Software Engineer leveraging AI to the fullest, rapidly building applications with minimal guidance and maximum efficiency.

EDUCATION

Case Western Reserve University

Masters in Computer Science.

U.S

08-2023 – 05-2025

SKILLS

- **Programming Languages:** .NET Core, C#, Python, Java, Advanced SQL, T-SQL, JavaScript
- **Frameworks & Libraries:** ASP.NET Core, React.js, Angular, Spring, SignalR, Entity Framework Core, Selenium, NumPy, Pandas, Matplotlib, LangChain, RESTful APIs
- **Cloud Platforms:** AWS (EC2, Nitro Enclaves, S3), Microsoft Azure (Active Directory, Blob Storage, OpenAI, Cosmos DB, Functions, Compute, App Services), Vercel (V0)
- **CMS & Frontend Platforms:** HubSpot CMS, WordPress
- **Tools & Platforms:** Git, Docker, Visual Studio, Postman, Streamlit, Power BI, CI/CD Pipelines (GitHub Actions), DevOps
- **Databases:** SQL Server, Cosmos DB, MongoDB, MySQL
- **Web Technologies:** React.js, Angular, Bootstrap, Node.js, AJAX
- **Development Methodologies:** Agile, Project Management
- **Testing & Quality Assurance:** Selenium, Manual Testing, Regression Testing, xUnit
- **Architecture & Design:** Microservices Architecture, Document Management Systems
- **UI/UX & Design:** Figma, Responsive Web Design, Iterative Prototyping, UX Audits
- **Soft Skills:** Problem-solving, Communication, Team Leadership.

WORK EXPERIENCE

Web Developer Intern | Waverly Partners (Ward Howell Company)

04/2025 – 04/2025

- Collaborated on building an AI-driven job-matching platform using ASP.NET Core, Angular, and Azure; matched candidates to job roles using semantic similarity with BERT embeddings and skill-based vector scoring.
- Developed and integrated resume parsing, job role comparison, and verification workflows using Azure Blob Storage, Cosmos DB, and Logic Apps to automate candidate-company communication for role validation.
- Deployed scalable microservices with containerized .NET APIs and frontend hosted on Vercel (V0), ensuring CI/CD automation, security, and cross-environment consistency.
- Enabled real-time user experience and intelligent matching through NLP pipelines, sentence embeddings, and verification protocols, improving recruiter decision-making and candidate authenticity.

Software Engineer Intern – Full Stack | Tharro Labs Inc.

04/2025 – 04/2025

- Contributed to the development of an AI-powered dating app by integrating GPT-based models for profile matching, sentiment analysis, and smart conversation suggestions.
- Built full-stack features using SwiftUI, TypeScript, and Supabase, including real-time messaging, authentication, and interest-based recommendation pipelines.
- Deployed frontend components via Vercel (V0) and optimized user experience with responsive feedback loops and behavior tracking.
- Participated in architecture and sprint planning, applied GitHub-based version control best practices, and implemented open-source tools for rapid prototyping and A/B testing.

Website and CRM Optimization Intern | Summer on the Cuyahoga

11-2024 – 04-2025

- Independently migrated the organization's main website from WordPress to HubSpot CMS, enhancing site usability, SEO, and administrative ease with zero downtime.
- Personally revamped and streamlined DonorDock CRM processes to improve donor tracking, automate follow-ups, and simplify reporting for non-technical users.
- Single-handedly designed and deployed custom landing pages for multiple colleges and events (e.g., Case Western, Oberlin, Smith, and Colgate), significantly boosting visibility and user engagement.
- Executed comprehensive UX/UI updates, content restructuring, and CRM integrations based on my own user behavior research and best practices.
- Delivered data-driven recommendations to leadership based on in-depth analysis of site performance and CRM effectiveness, influencing future digital strategies.

Research Assistant | Case Western Reserve University

09-2024 – 12-2024

- Built a secure, privacy-preserving data projection platform using React.js, MongoDB, Python (Federated Learning), and C#, containerized with Docker and deployed across multiple service providers using AWS Nitro Enclaves.
- Architected a multi-instance, multi-user system enabling secure computation over sensitive datasets, enforcing data plug-based access control across distributed resources.
- Implemented Federated Learning to train models on decentralized user data while ensuring compliance and data privacy using Nitro Enclaves and Aca-py for verifiable communication.
- Designed a controller service to manage communication and computation flow between users and service providers, supporting selective data sharing for specific training tasks%.

Teaching Assistant Case Western Reserve University	06-2024 – 12-2024
<ul style="list-style-type: none"> Mentored 60+ graduate students in Computer Networks, covering core topics such as TCP/IP, DNS, DHCP, NAT, CIDR, Subnetting, routing protocols (OSPF, BGP), socket programming, and distributed systems architecture. Evaluated and provided in-depth feedback on 120+ assignments involving packet-level analysis, congestion control, client-server models, and network topology design, resulting in a 20% increase in student comprehension and performance. 	
Software Engineer, Full Stack .Net Developer HCL Technologies	08-2022 – 12-2023
<ul style="list-style-type: none"> Designed and developed scalable microservices using ASP.NET Core and C#, integrating business logic with Entity Framework Core for seamless data operations across SQL Server databases. Built dynamic and responsive React.js front-end applications, connected via RESTful APIs, ensuring consistent user experience and real-time data interactions. Deployed applications on Microsoft Azure using App Services, Azure Functions, and Blob Storage, optimizing performance and ensuring high availability. Secured authentication flows using Azure Active Directory (AAD) with OAuth2 and SSO, while containerizing services using Docker for cross-environment compatibility and local development. Created automated CI/CD pipelines in Azure DevOps, wrote unit/integration tests using xUnit, and conducted code reviews to maintain code quality and deployment efficiency. 	

CERTIFICATIONS

<ul style="list-style-type: none"> Docker (LinkedIn) C# (Microsoft) API Student Expert (Postman) Data Science (Cisco) Artificial Intelligence (Salesforce)

PROJECTS

<u>Document Management System Inspired by DocVue</u> React.js, TypeScript, .NET Core, SQL Server	01-2025
<ul style="list-style-type: none"> Created an automated document management system where admins upload documents, and AI routes them to the appropriate department (e.g., HR, Finance, Management). Developed a seamless approval/rejection workflow, enabling team members to provide feedback and allowing rejected documents to be reassigned for further review. Automated document processing, reducing manual work, enhancing productivity, and ensuring smooth document flow across departments. 	
<u>Chatbot Agent for Companies</u> Python, Streamlit, LangChain, ChatGPT API, Huggingface	01-2025
<ul style="list-style-type: none"> Developed a PDF-powered chatbot using LangChain and ChatGPT API to answer company-related queries. Integrated Huggingface language models and optimized the chatbot for efficient, accurate responses. Built a scalable solution to analyze PDFs and interactively provide company information to users. 	
<u>Cloud Resume and Chatbot Platform</u> .NET Core, Azure OpenAI, Cosmos DB, Blob Storage, Azure Functions, Js	11-2024
<ul style="list-style-type: none"> Built an interactive resume platform with dynamic content and visitor analytics, leveraging Azure Blob Storage and Cosmos DB. Created a chatbot powered by Azure OpenAI for responsive, resume-specific queries. Established CI/CD workflows with GitHub Actions and performed robust testing using xUnit. 	
<u>University Class Automation System</u> Selenium, C#, ClosedXML, Windows Task Scheduler	01-2025
<ul style="list-style-type: none"> Developed an automated system to log in, process university class schedules in Excel, and identify open classes with available seats using Selenium and ClosedXML. Integrated secure credential management and automated email notifications for real-time updates. Scheduled recurring execution via Windows Task Scheduler, streamlining the process and saving users significant time. 	
<u>Blog Application</u> Node.js, Express, Angular, MongoDB	11-2024 - In Progress
<ul style="list-style-type: none"> Building a functional blog platform with the MEAN stack, featuring a dynamic Angular front end, a Node.js and Express backend with RESTful APIs, and MongoDB for efficient data storage and seamless user interaction. 	
<u>E-commerce Platform</u> C#, ASP.NET Core, MySQL, Web APIs	11-2024
<ul style="list-style-type: none"> Built a full-stack e-commerce platform with user registration, login, role-based access control, and secure navigation using ASP.NET Core Identity and Entity Framework Core for database operations. Designed dynamic Razor Views with AJAX interactivity, implementing attribute routing, model binding, and comprehensive unit and integration testing to ensure functionality and reliability. 	
<u>Real-Time Chat Application</u> C#, ASP.NET Core, SignalR, React.js, WebSockets	02-2023
<ul style="list-style-type: none"> Developed a real-time messaging platform operating SignalR and WebSockets, managing thousands of concurrent users with minimal latency. Achieved load balancing and honed API performance for seamless user experience. 	
<u>Contact Management Application</u> Angular, .NET MVC, MySQL	09-2024
<ul style="list-style-type: none"> Created a web application enabling users to add and delete contacts via a seamless interface, utilizing Angular for front end and ASP.NET Core Web APIs for back end. Built a responsive UI compatible with various devices and performed RESTful services to manage contact data efficiently. 	

