

Rajvi Mehta

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Software Engineer with 7 years of experience building cloud, AI, distributed systems, and analytics platforms from current startup and Microsoft. Expertise in Python, TypeScript, AI Agents, and cloud computing. Delivered customer-facing features end-to-end, optimized platform performance, reduced cloud costs, and led projects from design through production deployment.

PROFESSIONAL EXPERIENCE

Synterra, Founder & Software Engineer

June 2025 - now

- Implemented AI-powered health platform delivering personalized coaching and insights to people.
- Built backend in **Python**, frontend in **TypeScript** and **React**, using **PostgreSQL** on Supabase for database, deployed and hosted the app on cloud servers across production and staging environments. Implemented OAuth with encryption.
- Architected **multi-agent systems** by orchestrating various **LLMs** via **LangChain**, utilizing **Hugging Face** for model hosting, deploying the interface through the **Vercel AI SDK** for AI chat streaming, AI Gateway for handling multiple LLMs, and integrating **RAG** for higher quality responses.
- Define product roadmaps, turn customer feedback into features, and constantly innovate the product.

Microsoft, Software Engineer II

Aug 2019 - June 2025

Azure AI/HPC

- Scaled and optimized Azure HPC GPU infrastructure running **Nvidia** or **AMD GPUs** for supporting AI training and inference workloads on Azure, partnering with OpenAI and enterprise customers to improve performance, reliability, and deployment.
- Built the [Node Health Check \(NHC\)](#) framework and **CI/CD pipelines** using Bash, **SQL**, **YAML**, and **Docker** in **Azure DevOps** and **GitHub Actions** for 25+ Azure HPC VM configurations, enabling automated node validation and reducing deployment issues across large-scale buildouts. Managed VM capacity across regions and automated authorization roles like RBAC, ssh keys, and bearer tokens in data pipeline to run tests on all VMs.
- Created cross-team Power BI dashboards using Azure Cosmos DB and Azure Synapse to monitor VM health, improving node fault detection.

Azure IoT Connect Vehicle Platform

- Lowered the cost for customers by 20% by migrating to open-source technologies and right-sizing tools. Compared **Databricks** and **Kubernetes** for running Apache Spark streaming jobs in **Scala** using **PySpark** and fine-tuned AKS and Spark configurations by building data pipelines in **C#**, **TypeScript**, **PowerShell**, and **YAML**.
- **Led performance testing** efforts, which **reduced latency by 10%** for Azure Event Hub to batch process high throughput messages and analyzed the messages landed in Azure Data Lake. Scaled the platform to process up to 100,000 messages/second and 5 million messages in a run. Automated performance testing using ADO data pipelines and built monitoring tools for performance metrics in **Grafana** dashboards with alerts in Azure Data Explorer.
- Created simulated vehicles and a data generator using **Python** and **Redis** to send telemetry for **training AI/ML models** and presented the data in Grafana.

Dynamics 365 Commerce

- Designed and delivered a customer-requested email receipts feature in .NET, including **C#**, **SQL**, **TypeScript**, and end-to-end tests for the POS service part of the e-commerce platform.
- Participated in on-call rotation, where I mitigated, resolved, and conducted root cause analysis on customer facing production incidents. Optimized slow queries and took initiatives to improve processes as well.

Software Engineer Intern on Dynamics 365

May - Aug 2018

- Built, shipped, and demoed fulfillment features on Distributed Order Management, a logistics platform that generates efficient shipping plans across warehouses, stores, and end customers for major retail enterprises. Implemented batch jobs for order processing and partnered with MS Research to design constraint satisfaction models.
- Developed and delivered scheduling models using C#, SQL, and Gurobi, an integer programming solver, to optimize order routing and inventory allocation.

SKILLS

Languages & Frontend/Backend: Python, TypeScript, Java, C#, SQL, Powershell, YAML, Scala, React, React, Node.js, REST APIs, OAuth, PostgreSQL

Cloud & Infrastructure: Azure, AWS, Kubernetes, Docker, Azure DevOps, GitHub Actions, CI/CD

Data & Analytics: Apache Spark, Databricks, Redis, Grafana, Git

AI & ML: LLMs, AI Agents, RAG, MCP, LangChain, HuggingFace

EDUCATION

Rutgers University - New Brunswick, NJ

Sept 2015 - May 2019

B.S. Computer Science

Computer Science Honors Program

Relevant Courses: Graduate AI, Distributed Systems, Internet Technology, Systems Programming, Algorithms, Software Methodology (OOP), Databases, Probability, Programming Languages, Computer Architecture, Data Structures (*ranked in top 2%*), Data Literacy, Intro to CS (Java), Discrete Math, Differential Equations, Multivariable Calc, MatLab, Digital Logic Design, Pedagogy

PERSONAL PROJECTS

Docoline - legal redlining tool with AI integrations

- Created a personal legal document redlining, editing, and searching tool with AI suggestions and summaries:
- Implemented using TypeScript, Vercel AI Gateway, Groq, Llama LLMs, and Gemini LLMs.

Ranked 5th out of 141 on Kaggle Prediction Puzzle - Data Literacy, Rutgers University

- Implemented a combination of data science techniques including decision trees and statistical tests in R from testing data to create [prediction](#) of students' final grades

See more projects on my [GitHub!](#)

LEADERSHIP

Mentor for Software Engineer

May 2024 - now

- Meet bi-weekly to mentor an early in career software engineer and provide guidance on software engineering and working at Microsoft.

Microsoft Intern Leader

May - Aug 2022

- Led events for a group of 25 interns and mentored them throughout the summer.

CS Teaching Assistant - Rutgers University

Sept 2016 - May 2019

- Independently led Data Structures recitations, work with the professor to add new exercises to the course, as well as create material and lead study groups in Java for 3 hours weekly. Held extra sessions and review sessions with 150+ students.
- Independently led Intro to CS recitations and study groups in Java for 3 hours weekly
- Tutored students for engineering classes including MATLAB, statics, and physics

Vice President and Event Coordinator of Rutgers Veg Society

Sept 2015 - May 2019

- Led the leadership team to create a community and bring awareness of awareness of animal ethics, plant-based diet for nutrition, and environmental impact from meat at Rutgers University.
- Won the club to win the Bridge Builder award.