Rokesh Prakash

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EDUCATION

Stony Brook University	Aug 2023 – May 2025
Master of Science in Computer Engineering [GPA: 3.88/4.00]	*New York, USA*
Indian Institute of Information Technology	Jul 2015 – May 2020
Dual Degree - B.Tech (Mechanical Engineering) & M.Tech (Advanced Manufacturing) [GPA: 8.59/10.00]	*Chennai, India*

EXPERIENCE

Graduate Teaching Assistant — Aug 2024 – May 2025
Stony Brook University, Department of Electrical & Computer Engineering — *New York, USA*
- Elevated **C** and **Git** proficiency for **100+** students through structured tutorials in Programming Fundamentals under **Prof. Doboli**.
- Designed modules and led hands-on **C++** lab sessions in Advanced Programming & Data Structures under **Prof. Xin Wang**.

Software Engineer — Jun 2021 – Dec 2022
Congruent Solutions — *Chennai, India*
- Contributed to a U.S. retirement product, **serving over 5M** users on **Azure** by using **C#, Entity Framework, REST API, RabbitMQ, and SQL** for backend and **JavaScript, React.js**, and **ELK** for frontend integration and logging.
- Boosted page response time by up to **300%** by optimizing database queries with Dapper ORM, Redis, indexing strategies, and stored procedures. Conducted performance testing and ANTS profiling to identify and resolve bottlenecks.
- Reduced manual data mapping effort by **60%** by streamlining Excel column mapping to system objects through a React-integrated **Web API** in ASP.NET Core and leveraging **Azure Functions**.
- Accelerated debugging by **40%** by integrating **Serilog** with ELK stack (Elasticsearch, Logstash, Kibana) for real-time log monitoring and enhanced system observability.
- Automated 50% of customer emails by integrating **SendGrid API**, dynamic templates, and event-driven triggers with **RabbitMQ**.

Software Engineer — Jun 2020 – Jun 2021
SVP Laser Technologies — *Chennai, India*
- Developed a Windows-based CNC control application for 4-axis and 5-axis machines using **C#**, **.NET Framework**, **WPF**, **Azure Cloud Services**, and **Entity Framework**, enhancing automation, and precision in advanced manufacturing.
- Refined deployment speed by **60%** by automating **CI/CD** pipelines in **Azure DevOps**, leveraging **Docker** for containerization, **Azure Kubernetes Service (AKS)** for orchestration, and **Azure Container Registry (ACR)** for image storage and management.
- Improved data accessibility and enabled predictive maintenance by integrating **Azure SQL Database and Azure Blob Storage** for scalable cloud-based storage and real-time analytics on historical performance metrics.
- Engineered a closed-loop feedback system with **EmguCV (OpenCV)**, improving performance **by 2x** and reducing runtime by **70%**.

Software Engineer Intern — May 2019 – May 2020
Titan Company Limited — *Chennai, India*
- Achieved **96% accuracy** in identifying textile fiber and silk purity by implementing a CNN model in Python with TensorFlow/Keras.
- Simplified fabrication for prosthetic leg by developing a **C++** OpenCV-based measurement system, with **0.05** precision.

TECHNICAL SKILLS

Programming & Development: C#, Python, Java, JavaScript, TypeScript, C++, C, VB.NET, SQL, LINQ, RESTful APIs
Frameworks & Libraries: ASP.NET Core (MVC, WebForms, WPF, Web API), Entity Framework, ADO.NET, Dapper ORM, React.js, Node.js
Cloud & DevOps: Azure (Web App, Functions, SQL Database, ACR, Blob Storage), AWS (EC2, EKS, Lambda, S3, DynamoDB), GCP (BigQuery)
CI/CD & Infrastructure: Git, GitHub Actions, AWS CodePipeline, Azure DevOps Pipelines, Docker, Kubernetes (EKS, AKS), Terraform
Software Engineering: Agile Methodology (Scrum), Data Structure and Algorithm, Microservices, Object Oriented Programming, Design Patterns
Skills: Full Stack, Distributed Systems, Bootstrap, Tailwind CSS, MySQL, MS SQL Server, RabbitMQ

PROJECTS

AI-Powered Cloud Automation | *Amazon Bedrock, OpenAI GPT-4o, Azure AI, Generative AI, Linux* — Jan 2025 – Mar 2025
- Boosted **product recommendations by 40%** using **Claude 3 Sonnet (Amazon Bedrock)** and **Generative AI**.
- Streamlined **80% of customer interactions** (order cancellations, inquiries) with **OpenAI GPT-4o**.
- Optimized decision-making by analyzing **10K+ reviews** using **Azure AI Text Analytics** for sentiment insights.

Multi-Cloud Migration & CI/CD | *EC2, EKS, Google Cloud, AWS Lambda, Docker, Kubernetes, Terraform* — Feb 2025 – Mar 2025
- Migrated the on-premises CloudMart eCommerce app to **AWS, Google Cloud, and Azure**, enhancing scalability and reliability.
- Accelerated deployments by **60%** using Infrastructure as Code **(IaC)** with Terraform and **AWS CodePipeline & CodeBuild** to automate **CI/CD** for **Dockerized workloads** on **EKS & ECR**.
- Orchestrated **microservices** on **Kubernetes (EKS) & EC2**, integrating **DynamoDB, AWS Lambda, and Google BigQuery** for real-time multi-cloud data synchronization.

Multilingual Medical Chatbot | *Python, LLaMA 7B, LoRA, CUDA, Argos* — Aug 2024 – Dec 2024
- Fine-tuned **LLaMA 7B with LoRA**, improving medical query **accuracy by 63%** and terminology comprehension by 58% with multilingual support and optimized training efficiency using **NVIDIA CUDA** on an **A100 GPU**.

PageTurners E-Commerce | *C#, Azure, Identity Framework, Stripe, SendGrid, SQL, Git* — Jun 2024 – Jul 2024
- Developed and scaled **PageTurners** on **ASP.NET Core MVC (.NET 8)** with **Azure Web App**, leveraging **GitHub Actions** for CI/CD, Stripe for payments, SendGrid for email automation, and **Entity Framework** for CRUD operations.

CERTIFICATIONS

Microsoft Certified: Azure Developer Associate - View Certificate — Sep 2022 – Sep 2023