Rohit Ganesh

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Summary

Software engineer with nearly 4 years of experience in software development, machine learning, and cloud infrastructure. Delivered end-to-end ML solutions and optimized cloud systems for scalable, production-grade deployments. At TCS, drove cloud-native development, automated infrastructure, and deployed enterprise IT systems for Santos.

Education

- **George Mason University** — Fairfax, VA
  Masters of Science - Computer Science - GPA: 3.83 — *Aug 2023 - May 2025*
- **SRM Institute of Science and Technology** — Tamil Nadu, India
  Bachelors of Technology - Computer Science Engineering — *Aug 2015 - May 2019*

Technical Skills

Languages: Python, PHP, C++, JavaScript, SQL, Bash, PowerShell, Java
Frameworks: NodeJS, Mean stack, Pandas, PyTorch, Express, AngularJS, React
Tools: Kubernetes, Docker, Git, PostgreSQL, MySQL, SQLite, MongoDB, AWS S3, DynamoDB
Platforms: Linux, Windows, AWS, GCP, Azure, VMware, Hyper-V, Citrix Cloud

Academic Projects

PatriotPilot − A Virtual GMU Guide — Dec 2024

- Engineered an AI assistant using Python, FAISS, and Qwen-2.5 14B to provide GMU resource access via CLI and Flask GUI.
- Integrated FAISS for fast similarity search and assessed model using Precision, Recall, F1, ROUGE, and BLEU.
- Enabled GPU acceleration and LoRA fine-tuning, reducing model training time by 30% and enabling flexible scaling options.

Microservices-Based Student Survey System — Oct 2024

- Designed a Spring Boot microservices application with REST APIs and AWS RDS integration, managing 1,000+ records across 5+ survey modules using JPA/Hibernate.
- Deployed the containerized app on Kubernetes using Docker, enabling autoscaling and reducing provisioning time by 40%; built CI/CD pipelines with GitHub Actions and GitLab CI to cut deployment from hours to under 10 minutes.
- Tested 20+ endpoints with Postman and developed a Vue.js frontend enabling full-stack CRUD operations for up to 100 users.

Fantasy Premier League Prediction — May 2024

- Forecasted top squad picks using ML models trained on player performance trends and scoring rules.
- Implemented Decision Trees, KNN, and Random Forests; achieved 60–65% prediction accuracy.
- Analyzed player statistics and tactics to inform weekly FPL picks, improving overall fantasy team rank by 20%.

REST API and UI for Football Statistics — May 2019

- Built a MEAN stack application for real-time football statistics with an Angular UI and a Node.js backend handling 500+ daily API requests.
- Utilized MongoDB for scalable data storage and implemented advanced filtering features across 20+ leagues.

Professional Experience

Tata Consultancy Services (TCS) — New Delhi, India
Systems Engineer – Client: Santos (Full-time) — *Aug 2019 – Jun 2023*

- Automated CI/CD workflows, system administration, and cloud operations by scripting 50+ PowerShell and Python tools, cutting manual effort by 40%.
- Streamlined and refactored backend logic and system-level code, increasing infrastructure performance and uptime by 30%.
- Orchestrated operations across 5,000+ servers on AWS, Azure, VMware, and Citrix Cloud; implemented automation for patching and configuration, reducing infrastructure costs by 25%.
- Directed the end-to-end technical integration of an enterprise merger, uniting 10+ cross-functional teams to deliver zero-downtime consolidation.
- Engineered reproducible cloud environments using automated scripting, enabling version-controlled provisioning for rapid deployment and scaling.
- Developed custom monitoring dashboards and automated alerting scripts, ensuring system reliability and 99.9% SLA compliance.

Academic Work Experience

George Mason University   Fairfax, VA
Graduate Teaching Assistant   *Jan 2025 – May 2025*

- ○ Designed 5+ programming assignments and held 20+ hours of office support, improving engagement and participation across a class of 60+ students.
- ○ Graded 100+ exams and projects with detailed feedback and mentored 60+ students in C programming and debugging, resulting in improved lab performance and assignment success rates.

George Mason University   Fairfax, VA
Grader   *Sep 2024 – Dec 2024*

- ○ Evaluated algorithm assignments for 60+ students, ensuring fair grading while reinforcing core concepts.

Publications

Web Services: Architectural Styles and Design Considerations for REST API
https://www.ijitee.org/wp-content/uploads/papers/v8i7s/G10020587S19.pdf

Certifications and Awards

- • Distinguished Academic Achievement at George Mason University – May 2025
- • Star of the Quarter at Tata Consultancy Services – Jul 2022, Jan 2023