

Pranshu Gupta

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Professional Experience

Microsoft Azure • Senior Software Engineer • Mar 2024 – Present

Lead the development and technical architecture in resource provisioning area of Azure resource manager.

- Led and delivered improvements in bulk delete API, reducing P90 latency by 50% and P99 by 65%.
- Designed and led the development of background job quota-based throttling in Azure control plane.

Microsoft Azure • Software Engineer II • Jun 2020 – Feb 2024

Deliver high-quality, robust production code for Azure Resource Manager, the control plane of Azure

- Defined and presented a multi-semester roadmap for resource provisioning in Azure, by collecting data on the current state of the service, identifying opportunities for improvements, and proposing solutions.
- Implemented a critical security patch and helped more than 200 teams in Azure onboard to it.
- Optimized resource provisioning failure handling, which reduced unnecessary http requests by 90%.
- Implemented callback design for resource actions, which reduced the number of polling requests by 60%.
- Implemented staged retries for dependencies in resource group deletion, which reduced failures by 98%.
- Implemented jobs to delete data for deprecated resource types, resource providers and Azure regions.

Microsoft Core Services • Software Engineer • Jun 2017 – Aug 2019

Design and implement modules for Customer Data Enrichment Service, which enriches customer data from marketing campaigns to help marketers create better sales opportunities for Microsoft.

- Migrated to serverless architecture, reducing operation costs by 90% and improved performance by 3x.

Technical Skills

- Programming Languages : C#, PowerShell, Azure Bicep, Python, C/C++, Kusto QL, HTML, CSS, JS, MD
- Tools and Platforms : Microsoft Azure, .NET Framework, Azure CLI, Git, Azure DevOps

Education

Georgia Institute of Technology, Atlanta • May 2020 • MSCS (ML specialization)

Indian Institute of Technology, Kanpur • May 2017 • B.Tech. CS

Publications

- Saha, K., Gupta, P. et al. Observer Effect in Social Media Use | Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems - <https://dl.acm.org/doi/10.1145/3613904.3642078>
- El Sherief, M., Saha, K., Gupta, P. et al. Impacts of school shooter drills on the psychological well-being of American K-12 school communities: a social media study using multi-modal data analysis. Humanities and Social Sciences Communications 8, 315 (2021) – <https://www.nature.com/articles/s41599-021-00993-6>

Selected Projects

- Image completion with statistics of patch offsets – 44 stars on GitHub.
- Crowd behavior analysis – detect outliers in the trajectories of entities in a moving crowd using the minimum description length principle – 39 stars on GitHub.
- Deep image captioning – generate captions for an image using deep reinforcement learning model with embedding reward – 26 stars on GitHub.