PRANSHU GUPTA

SOFTWARE ENGINEER II
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EDUCATION

Georgia Institute of Technology, Atlanta
Master of Science in Computer Science / May 2020

Indian Institute of Technology, Kanpur
Bachelor of Technology in Computer Science and Engineering / June 2017

EXPERIENCE

Microsoft | Software Engineer II | Jun 2020 – Present
Designing and developing modules for Azure Resource Manager, the control plane for Azure.

- Implemented improvements in resource group deletion job, reducing certain failure rates by 80%.
- Implemented batching for resource synchronization, increasing job throughput by 1000x.
- Implemented improvements in async callback design, eliminating storage throttling in job lookups.
- Designed and implemented jobs to delete resources at different scopes, allowing clean teardown of resource types, resource providers or entire regions in Azure.
- Integrated classic resource providers with datacenter security token service for JEDI compliance.

Microsoft | Software Engineer | Jun 2017 – Aug 2019
- Designed and implemented modules for customer data enrichment service, which helps thousands of marketers create sales opportunities and generate higher revenue.
- Improved performance by 3x and slashed cost by 90% by authoring a serverless architecture for the data flow orchestration layer of the service using Azure Function Apps.
- Achieved a 40x speed-up in enrichment with file uploads by optimizing SQL stored procedures.

RESEARCH

SocWeb Lab, Georgia Tech
[Nature Journal] ElSherief, 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. Humanities and Social Sciences Communications 8, 315 (2021). https://www.nature.com/articles/s41599-021-00993-6

- Applied machine learning and interrupted time series analysis to 54 million social media posts in 114 schools spanning 33 states to study psychological impacts of school shooter drills.
- Showed that anxiety, stress, and depression increased by 39–42% following the drills, accompanied by an increase in civic engagement up to 10–106%.

PROJECTS
- Implemented a C# to x86 compiler in Python (70% ANTLR spec supported).
- Contributed to the open-source editor VS Code, to help enable strict null check tests.
- Developed computer graphics algorithms for constructing field aligned triangle meshes.

SKILLS
- **Languages :** C#, Python, C++, HTML, CSS, JavaScript, SQL
- **Machine Learning :** PyTorch, scikit-learn, OpenCV, Azure ML
- **Technologies :** Microsoft Azure, Processing 3D, GIT