PRANSHU GUPTA

**SENIOR SOFTWARE ENGINEER**

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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