Om **Kelkar**

Software Engineer based in New York, NY

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Experience

Meta Platforms, Distributed Tracing Platform
November 2021 - Present

Software Engineer — *New York, NY*

- Drove vision to build a new service topology visualization tool 'Hopper', leveraging existing service tracing data set.
- Designed a data freshness and disaster recovery solution in C++ for trace processing backend, with under 1% expected data loss.
- Identified and resolved a bottleneck in trace processing, decreasing event parsing latency by 37.5%
- Updated sink format of service tracing data set from JSON to thrift binary to decrease cost from 1.15GB/s to 809MB/s at peak load.
- Implemented load-shedding knobs to turn off non-critical functionality in high traffic scenarios, prioritizing events based on a custom criticality score.
- Defined a dependency-focused alerting strategy with customer facing service level indicators to improve team oncall.

Microsoft Corporation, Personal Insights
August 2018 - October 2021

Software Engineer — *Redmond, WA*

- Project lead for the dynamic landing page for Teams app, packaging existing insights into one-click solutions to increase user engagement.
- Delivered critical update to the licensing API, which prevented the in-the-flow service from affecting Teams web app, Outlook add-in, and email services. Reduced overall service downtime by 40%.
- Bootstrapped a business continuity reporting solution in April 2020 for 30 of our top customers.
- Implemented an in-the-flow to-dos actionable message that added 15 million monthly clicks.
- Created a dashboard to monitor health of the in-the-flow service, preventing two major bugs escaping into production.
- Accessibility champion for Viva Insights in Teams, leveraging best practices of ARIA, color contrast, and mobile responsiveness.
- Highly sought after code reviewer by peers and technical leads.

Microsoft Corporation, Personal Insights
May 2017 - August 2017

Software Engineering Intern — *Redmond, WA*

- Developed a new insight in the Outlook side pane to calculate their attendees' meeting-preparedness based on attachment open signals.
- Augmented existing email read statistics experience with above attachment data.

Education

Carnegie Mellon University
Pittsburgh, PA

B.S. Computer Engineering, Additional Major in Biomedical Engineering, University Honors 3.71/4.0 — *Aug 2014 - May 2018*

Projects and Teaching

Supplemental Instruction / EXCEL Program
Pittsburgh, PA

Student Supervisor, Student Teacher — *August 2016 - May 2018*

- Managed 30 student teachers by providing ongoing enrichment, hosted teaching seminars on the seven learning styles, hands-on problem solving, and reinforcing first principles. Their work had a positive impact on over 500 students each year.
- Taught 15 students each semester for Signals & Systems and Digital Systems coursework.

MedBot-Home
Pittsburgh, PA

Developer — *May 2017*

- Designed an automatic medication dispenser for in-home patient care use. Wired 6-servo controller to Raspberry Pi.
- Built a web application using Python Flask framework to allow caretakers to remotely update list of medications and dosages.

Lock-free Priority Queue
Pittsburgh, PA

Developer — *May 2017*

- Implemented a skiplist-based priority queue in C++, leveraging a lock-free paradigm to support concurrency, resulting in 2x speedup over traditional fine-grained locking approaches in insert heavy loads.
- Designed a dirty pointers scheme to handle conflicting insert and deletion operations to preserve accuracy.
- Developed a test harness in C++ and an insert/delete trace generator in Python to assess performance.

Skills

Computer Languages: TypeScript, CSS, HTML, Python, C++, C-sharp, C, SQL, SML

Technologies: ReactJS, OData, FluentUI, Git, Bash, Powershell, ARIA