

# Usman Masood

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## Education



BS Computer Science and Engineering, [MIT](#)

Sept 2008–June 2012

Coursework heavily focused on systems and algorithms

GPA: 5.0/5.0



Teaching Assistant, Database Systems, [MIT CSAIL](#)

Feb 2012–June 2012

With Sam Madden and Mike Stonebraker

## Work



Software Engineer, [Stripe](#)

Jan 2017–Present

I'm working with the Treasury team to build out infrastructure that lets us accurately track all fund flows within the Stripe universe.



Chief Architect, [PipelineDB](#)

Sept 2014–Jan 2017

I was the Chief Architect at PipelineDB. My work included architecting and implementing all of our core technologies. Most of the work I did is open-source and can be found on their [GitHub](#). Some of the things we built at PipelineDB were:

- [PipelineDB](#), a fork of PostgreSQL that runs SQL queries continuously on streaming data
- `pipeline_cluster`, an extension for PipelineDB that adds high availability and horizontal scalability support
- `pipeline_kafka`, an extension for PipelineDB that adds support for ingesting data from and producing data into Kafka
- [Stride](#), a real-time analytics API powered by PipelineDB. The system

is implemented in Go, is fully containerized and runs on Mesos



### Software Engineer III, [GoDaddy](#)

Sept 2013–Sept 2014

Locu got [acquired](#) by GoDaddy after which I started working there. Apart from the things I was already doing at Locu, most of the year was spent on migrating our infrastructure over to GoDaddy's private cloud. I was mostly involved in porting our users & payment management and analytics infrastructure to GD's stack.



### Software Engineer, [Locu](#)

Aug 2012–Aug 2013

Being an early engineer at Locu, I wore a lot of different hats. Some of the things I worked on were:

- Designed and implemented both v1 and v2 of Locu's [Developer API](#). The technologies used included Elasticsearch, RabbitMQ, Celery and Redis
- Accounts and payment management using Stripe and later GoDaddy's checkout cart service
- Caching infrastructure for Locu's [embeddable widgets](#), which are dynamically generated and so caching them was trickier than simply putting static data behind a CDN
- Served as Head of Metrics and was responsible for ensuring we were on top of user and infrastructure metrics. I led the effort to build an open-source analytics stack called [Chronology](#)



### Software Engineer Intern, [Facebook](#)

June 2010–Aug 2010

I worked in the Database Engineering team. During the internship, I made some improvements to HBase, including implementing async RPC support for their internal HBase fork. I hacked on HDFS and implemented file system snapshot support for it. I also made the prototype port of [LinkBench](#) from Java to C.

- [\[HADOOP-7460\] Support for pluggable Trash policies](#)
- [\[HDFS-2150\] Use new Trash Emptier methods](#)

Software Development Engineer Intern, [Microsoft](#)



June 2010–Aug 2010

I worked on the Messenger Web Platform team. My work included server-side work for Messenger Chat, building developer widgets and adding Facebook OAuth support to it. I also made some improvements to `Script#`, a C# to JavaScript compiler, which was internally used by the team.

## Tech Bits

- **Languages:** Python, C, Go, JavaScript, Ruby
- **Databases:** PostgreSQL, Redis, Cassandra, ElasticSearch, MongoDB, HBase
- **Infrastructure:** Kafka, Docker, Mesos, Marathon, HAproxy, AWS