Adil Z. Ansari

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Professional Experience

Amazon *May 2019 - Present*

Team lead - **Alexa Multimodal Experiences**

- Writing/maintaining low latency & high throughput platform services used by 15+ million Echo Show family of devices.
- Actively developing a v2 evolution roadmap for Ambient Home content distribution platform with product leadership.
- Worked with a new SDM to build a team of 9 Engineers to own a multi-tier stack of 12 microservices by EOY 2021
- Worked with Product & Engg. leadership to define a *beta* integration for 3p/external customers, empowering them to publish content to Home screens of Alexa Devices. Link to the external developer preview

Software Engineer/Tech lead

- Led a cross-organization team for defining ***v0* interfaces** for Alexa's enterprise partners to manage content on Alexa devices in their properties. This was the first monetization opportunity for Alexa devices outside of Amazon. Link to Alexa for Hospitality API preview
- Defined & developed ***v0* APIs** for Alexa content distribution platform to support Echo Show 10 launch , it was adopted & used by 30+ engineering teams within Alexa by 2021 Q4 to surface content across Echo show family of devices.
- Wrote the data compliance practices for Home devices. Led a TeraByte level data migration with 2 engineers for online systems.
- Designed and implemented a parallelized federated search to source data from 100+ Alexa 1p/3p backends in real time. Led a team of 3 engineers.
- Designed and developed an async data delivery platform for 15+ million Alexa devices. Fault tolerant with eventual consitency.
- Improved the availability of platform services to 99.9 & reduced costs by 15%. Recognized in the org for operational excellence.
- Wrote AWS Step Function workflows to innovate and improve team processes & manage customer relationships (internal engineering teams) through various channels.
- Stack: Java, Python, MySQL, Distributed systems, AWS CDK

Credit Karma *June 2016 - May 2019*

Platform/Infrastructure Software Engineer

- Platform team: Primarily wrote low latency, high throughput and async microservices for auth, identity, encrypt/decrypt, session and access management.
- Migrated and scaled a locally running service to a dockerized remote cluster to serve 6 million requests/minute, maintaining a p99 SLA of 20 ms.
- Developed a realtime fault-tolerant data re-encryption service to enhance data security for 250 TB of MySQL data.
- Drove a cloud migration initiative that required coordination among multiple Platform and Infrastructure teams.
- Stack: Scala, PHP, Python, MySQL, distributed systems, thrift, TCP, akka streams, Google cloud, Kafka, Docker.

Chartboost *April 2014 - June 2016*

Software Engineer

- Re-engineered and maintained critical REST based backend services using Flask.
- Wrote new video encoding pipeline which resulted in >20% decrease in bandwidth consumption and 6%-9% increase in revenue through videos.
- Developed data analysis tools for business management.
- Stack: Python, PHP, Javascript, MongoDB, Redis, Hive, Celery.

Samsung Telecommunications America *May 2013 - Aug. 2013*

Software Engineering Intern

- Contributed to the development of RESTful web services over mobile platforms
- Developed Object Oriented code to port the existing framework onto Android networking library, Volley.
- Enhanced the execution of JSON/Bitmap REST calls using Volley's in-memory and disk caching.

Skills

- **Software Development:** Agile development, Software Design Patterns, Project management and Leadership
- **Programming:** Scala, Python, JAVA, php, C, MySQL, NoSQL, MATLAB, HTML, LaTeX
- **Platforms:** Finagle, Akka, Android, Hadoop MapReduce, Hive, Apache Storm, AWS, Google Cloud
- **Operating Systems:** UNIX, GNU/Linux, Win32.
- Multithreaded systems, low level socket protocols, Async programming, Reactive systems, TCP/IP, REST, Git, Celery

Education

University at Buffalo, The State University of New York **GPA: 3.3/4.0**

Master of Science in Computer Science *Dec. 2013*

Relevant Coursework:

Analysis of Algorithms	Operating Systems	Distributed and Parallel Processing
Distributed Systems	Networking Concepts	Data Intensive Computing

Projects

Python Scribe Logger (https://pypi.python.org/pypi/scribe_logger) *2015*

- A low level interface for writing to Scribe, enabling real time streaming of aggregated log data.
- A log handler which plays nicely with Python's logging facilities.
- Averaged 1000 downloads per month once.

Cloud Computing Applications (JAVA, Hadoop, MapReduce, Apache Storm) *Coursera 2015*

- Aggregated a dataset of 6 million tweets & implemented MapReduce algorithms for word, #tag and @counts.
- Performed similar analysis using Apache Storm and implemented page rank algorithm on the dataset.

Amazon's Mini Dynamo (JAVA, Android, Multithreading, Distributed Systems) *Spring 2013*

- Developed a stripped-down version of Dynamo, a backend storage with real time node joins.
- Implemented ID space partitioning and applied ring based routing scheme for load distribution.
- Quorum based replicated key-value storage with failure handling.

Multithreaded Web Server (C, Unix, Multithreading) *Fall 2012*

- Designed a queuing and scheduler module on separate thread and dispatcher module using thread pool.
- Implemented Shortest Job First and First Come First Serve CPU scheduling policies to serve the requests.

Peer to Peer file sharing system (JAVA, Multithreading, Socket Programming) *Fall 2012*

- Decentralized p2p distributed file sharing program prototyped and implemented on Gnutella protocol.
- Search query is flooded through network, and a central routing table is maintained for all peer activities.
- Nodes communicated over TCP alongwith real time traffic monitoring.

Certifications

Agile project management - UC Berkeley Extension *March 2018*
Sun Microsystems certified JAVA Web Application Developer *July 2011*
Oracle Certified Professional, JAVA SE 6 Programmer *Jan 2011*