

Harris Ahmad

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A graduate student specializing in distributed systems and microservices, with incoming publications at top venues and production experience scaling backend infrastructure across research and industry.

EDUCATION

University at Buffalo, PhD Computer Science

January 2025 - December 2028

- **Teaching Assistant:** Modern Networking Concepts

Lahore University of Management Sciences, BS Computer Science

September 2020 - May 2024

- **Teaching Assistant:** Object Oriented Design in C++, Distributed Systems

PROFESSIONAL EXPERIENCE

Graduate Researcher, University at Buffalo (SUNY)

January 2025 – Present

- Built a distributed transaction **reordering and coordination** layer on top of production-grade systems like **Apple's FoundationDB** and **CockroachDB** in Go lang that reduces aborts, lock contention, and tail latency by **70%**; work submitted to **ACM SOSP 2026**.
- Prototyped **primary-backup**, **chain replication**, and **distributed two-phase locking** in Go to stress-test protocol behavior for **collaborative AI** workloads.

Software Engineer, Linq.io

July 2024 - December 2024

- Shipped an on-demand **media-generation API** (**FastAPI**, **MongoDB**) that cut page load by **60%** by generating **asset thumbnails** as users browsed **10K+** inventories.
- Integrated **OAuth 2.0 SSO** for **enterprise** accounts so customers could sign in to the asset-management product with **existing corporate credentials**.

Software Engineer, Interactive Media Lab LUMS

October 2023 - March 2024

- Built **Awaaz-e-Sehat**, a **HIPAA-aligned** e-health platform on **Flask** and **AWS Lambda**, improving API latency **5s** → **500ms** for **20K+** daily active users.
- Ran a serverless ingest and search stack (**Lambda**, **DynamoDB**, **Elasticsearch**, **S3**) over **50K+** clinical recordings with **automatic scaling** and **no always-on servers**.
- Productionized **Whisper + GPT-4** transcription into structured clinical notes (**95%** accuracy, **1K+** recordings/day); **Redis** caching reduced API latency by **~30%**.

Undergraduate Researcher, Network and Systems Group LUMS

May 2022 - December 2023

- Measured how **YouTube** main-video **bitrate** drives **buffer loss** across resolutions (**720p** ~**3×** higher **latent buffer loss** than **360p**; **10.1 MB** vs **3.4 MB**).
- Released a **public** dataset and toolchain covering **17.6K** videos and **46.6K** ads across **8** countries (**15+** features/video, including **per-video buffer telemetry**), described as the **first large-scale YouTube corpus** with that coverage.
- Published at **ACM The Web Conference 2024 (WWW '24)**: <https://doi.org/10.1145/3589334.3645496>.

PROJECTS

gitpull: [\[Link\]](#)

April 2026 - Present

- Homebrew-tapped CLI to run git workflows across many repositories from one command (less copy-paste, fewer context switches).

simpleauth: [\[Link\]](#)

May 2024 - Present

- Node.js authentication service template with 2FA and OAuth, designed with security-hardening patterns useful for high-risk domains (e.g., FinTech-style threat models).

deadpush: [\[Link\]](#)

May 2026 - Present

- A CLI guardian tool to protect your repo before AI wrecks it.

SKILLS

- Languages: Python, Go, JavaScript/TypeScript, C++, Haskell, PowerShell, Bash
- Frontend: React.js, Vue.js, Quasar, Next.js, HTML/CSS, D3.js, jQuery, Redux.js, Electron.js
- Systems and data: distributed systems, FoundationDB, CockroachDB, PostgreSQL, MongoDB, Redis, Elasticsearch
- Backend and APIs: FastAPI, Flask, Django, Node.js (Express), gRPC, GraphQL, WebSockets, OAuth 2.0 / SSO
- Cloud, ML: AWS (Lambda, DynamoDB, S3), Docker, K8s, GCP, TensorFlow, scikit-learn, LangChain, Jupyter, NLP