

AMAN KHALID

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EDUCATION

Northwestern University, Evanston, Illinois *Ph.D* in Computer Science SEP 2021 - 2026
First year PhD student in the Systems track of the Computer Science Department, with focus on Network Measurements
St. Louis University, St. Louis, MO, *Masters* in Computer Science GPA: 3.83 AUG 2019 - MAY 2021
Relevant Courses: Computer Networks, Advanced Algorithms, Software Architecture, Machine Learning
Amity University, Delhi, *Bachelors* in Computer Science & Engineering CGPA: 6.5 AUG 2013 - MAY 2017

EMPLOYMENT HISTORY

SLU School of Medicine (St. Louis, MO) | Research Intern MAY 2020 – AUG 2020

- Developed [My COVID19 Tracker](#) app using **React Native** for St. Louis County Department of Public Health.
- Built the backend of the app with **node.js** using Hyperledger Fabric's chaincode, and hosted it on **AWS**.

St. Louis University (St. Louis, MO) | Research Assistant OCT 2019 - PRESENT

- Implemented real-time resource provisioning for video streaming and segmentation using **Kubernetes** and **Docker**.
- Built a system for analyzing ultrasound images to generate a more comprehensive feed for medical doctors, using handheld transmitter probes, edge offloading, and real-time image analysis using segmentation.
- Published work in IEEE NFV-SDN 2020 sponsored by Huawei and Intel, on optimizing distributed systems.

Marsplay (New Delhi, India) | Backend Developer OCT 2017 - NOV 2018

- Built website scrapers in **Python** to gather inventory details for 8 categories from **e-commerce** sites for clothing.
- Developed server-side APIs to facilitate communication between various services of the **backend**, in node.js.
- Designed and developed **microservices** for order management, for both influencers and customers.

MYOLO (New Delhi, India) | Fullstack Developer JUL 2016 - SEP 2017

- Worked on the backend to implement interest mapping, location services, and caching, with latency **less than 100ms**.
- Simplified the setup & maintenance of staging, development, and production environments hosted on AWS.
- Coordinated API provisioning with **Java Spring** and versioning for outsourced client-side app developers(mobile).

RELEVANT SKILLS

Programming Languages - Python, C++, Java, JavaScript; **Server/Cloud** - k8s, Apache, Nginx, Docker, [OpenStack](#)
Backend Frameworks - Django, Node.js, Java Spring, Laravel; **Frontend Frameworks** - [React](#), Vue, Backbone.js

PROJECTS

- **Optimized Cuckoo Filter (St. Louis University)** - Built a variant of a [cuckoo filter](#) for burst tolerance, low latency, and throughput for membership testing, optimized for distributed data stores operating at high workloads written in **Java**.
- **Influencer Hunter (Marsplay)** - Developed a tool to find the most prominent profiles under a certain hashtag or location on Instagram and analyze their reach, with web scrapers(**python**) for data gathering.

PUBLISHED RESEARCH

Aman Khalid, Flavio Esposito, Alessio Sacco, and Steven C. Smart. "EdgeEcho: An Architecture for Echocardiology at the Edge". In IEEE 17th International Conference on Network and Service Management (CNSM 2021). Izmir, Turkey 25-29 October, 2021; (short paper).

Aman Khalid and F. Esposito, "Optimized Cuckoo Filters for Efficient Distributed SDN and NFV Applications," 2020 IEEE Conference on Network Function Virtualization and Software Defined Networks (NFV-SDN), 2020, pp. 77-83, doi: 10.1109/NFV-SDN50289.2020.9289870.

Aman Khalid (2021). Enabling High-Performance Applications at the Network Edge (Doctoral dissertation, Saint Louis University).