

# SHAYAN HOSSEINI

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## SUMMARY

Software engineer with an MSc in computer science and 5 years of industry experience, **3 years as a technical manager**. Experienced in building large-scale backend services, led the development of systems serving **500 million requests per day**. Recognized by winning awards in **world-class programming contests**. Expert in distributed systems, implemented novel systems, and published distributed systems research in top venues.

## EXPERIENCE

### Software Systems Researcher at the University of British Columbia

Jan 2021 - Aug 2023

- Designed and built a high-performing **distributed key-value store** based on the Raft protocol, achieving a **40% increase in throughput** compared to state-of-the-art verified systems.
- Published my work at ASPLOS, a top-tier systems conference (21% acceptance rate) and was invited to deliver a talk on the topic at leading companies such as AWS and Microsoft.
- Developed open source projects, PGo and GoVector, with more than **15,000 downloads** and 300 stars on GitHub.

### Research Intern at Microsoft Research Redmond

Jun 2022 - Sep 2022

- Created a system that prioritizes the critical faulty datacenter links for the fix using reinforcement learning.
- Demonstrated a 13% reduction in failures of Microsoft Azure's automatic mitigation system for datacenter links.

### Staff Software Engineer at Cafe Bazaar

Jan 2020 - Dec 2020

- Led a team of 10 engineers** to make a unified cloud services product from services developed by other teams.
- Designed, implemented, and shipped a billing system automating user charges, resulting in a **20x faster** process.

### Senior Software Engineer at Cafe Bazaar

Jan 2017 - Apr 2019

- Joined the internal infrastructure team as the **4th member** and played a key role in the team's successful transition into a **public cloud company** with over 50 employees.
- Led a team of 8 engineers building content delivery network (CDN) and object storage services.
- Rolled out a distributed object storage service, **serving TBs of data** and **over 100 million requests per day**.
- Scaled out the capacity of CDN service by 50% through deploying a new architecture utilizing cache servers.

### Software Engineer at Cafe Bazaar

Jul 2015 - Jan 2017

- Implemented new features on a back-end codebase with ~100,000 lines of Python code and 30 million users.
- Managed the CDN and multiple back-end services across 15+ servers to ensure optimal performance and availability.

## EDUCATION

### University of British Columbia

Jan 2021 - Aug 2023

M.Sc. in Computer Science

### University of Tehran

Sep 2015 - Aug 2020

B.Sc. in Software Engineering

## AWARDS AND HONORS

### Distinguished Artifact Award in the 28<sup>th</sup> ASPLOS conference

Mar 2023

*Awarded to the top 5% of accepted papers, recognizing an outstanding artifact contributing to research and practice.*

### World Finalist in the 41<sup>th</sup> ACM ICPC World Finals, South Dakota, USA

May 2017

*Top 0.1% among more than 45,000 students from all over the world.*

### 3<sup>rd</sup>, 2<sup>nd</sup>, 2<sup>nd</sup> place in ACM ICPC West Asia Region Regional Contest, respectively in 2018, 2017, 2016.

*Top 1% among more than 300 teams that participate in this contest every year.*

### Silver Medal in the 24<sup>th</sup> Iranian National Olympiad in Informatics

Sep 2014

*Top 0.5% in the algorithmic programming contest among 10,000 participants in the country.*

## TECHNICAL SKILLS

Languages	Go, Python, C/C++, Java, Bash, TLA+
Frameworks	Django, Flask, ReactJS, Pandas, gRPC
Technologies	Kubernetes, Docker, PostgreSQL, Redis, Nginx, Microsoft Azure, AWS, Git