Mohammad Nasirifar

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https://github.com/farnasirim
https://blog.farnasirim.com

Professional software engineer with 3+ years of work experience in modern C++, Go, and Python. Keen on algorithms, data structures, and low-level systems performance.

Work Experience

Software engineer, **SHIELD Crypto Systems Inc.** C++, Cryptography Oct 2020—

· Working on commercializing and speeding up homomorphic encryption

Vising researcher, **Massachusetts Institute of Technology** Python, C, C++, AWS Jun 2019–Aug 2019

· Improved accuracy/battery usage trade-off of a movement tracking device by 10%
· Designed and implemented secure logging/monitoring using mTLS for devices

Software engineer, **Cafebazaar Inc.** Go, C++, Python Oct 2015–Sep 2018

· Worked on android app market (30m+ users) and classified ads (15m+ users)
· Lead the ad classification team, implemented a document similarity metric in Tensorflow
· Improved automatic ad reviews by 15% using the document similarty metric
· Designed and implemented query prediction from scratch using tries
· Optimized prediction rtt to less than 1ms, 100× improvement over Elasticsearch
· Implemented Kubernetes control subsystem in our bare-metal cluster manager
· Rewrote a search system as stateless microservices, deployed to Kubernetes
· Improved search rtt by a factor of 10 by designing an efficient sharding scheme
· Lead the redesign of a coding interview stage
· Conducted 50+ interviews, helped grow from 100 employees to 350

Education

University of Toronto: M. Sc. Computer Science Sep 2018–Oct 2020

· GPA: 4.0
· Thesis: Black box migration of data structures over RDMA (`https://farnasirim.com/thesis`)

Beheshti University: B. Sc. Computer Science Spe 2013–Jun 2018

· GPA: 18.55/20, Ranked 1^{st} in class
· Final project: Mountain road planning using Delaunay Triangulation and Ant Colony

Other Skills

In-depth knowledge of RDMA, Linux userspace programming API, and shell scripting

Working knowledge of TLS, gRPC, microservices, and distributed systems design

Bronze medalist in 2018 National Mathematics Competition

ICPC Regional contest champion, advanced to 2017 World Finals (placed 56th)