MD Iftakharul Islam

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EDUCATION

PhD, Computer Science
Kent State University, Kent, OH, USA.   GPA 3.82   2019 (expected)

Bachelor of Science, Computer Science and Engineering
Bangladesh University of Engineering and Technology (BUET), Dhaka, Bangladesh   Jan 2008

PROGRAMMING SKILLS

C; Linux Kernel; C++; Java; C#; Python

PROFESSIONAL EXPERIENCE

Kent State University   Sep, 2013 - present
Kent, OH, USA   (Graduate Assistant)

- Developed a routing table lookup algorithm in Linux kernel (in C). Currently it is the fastest routing table lookup algorithm, to the best of our knowledge.
- Implemented a router-assisted TCP in Linux kernel where TCP sending rate is calculated based on the explicit feedback from router (in C). The router-assisted TCP performs better than delay-based congestion control (currently used in Google Hangout) for video conferencing.
- Implemented RCP protocol for network processor based routers using Linux eBPF (in C).
- Developed a GStreamer based video streaming application (in C).
- Developed several experimental network topologies using Mininet (Python).

inConatact   May, 2015 - Aug, 2015
Columbus, OH, USA   (Software Development intern)

- Simulated a call center where simulated calls are generated based on various probabilistic distributions. The calls are then assigned to agents based on their schedule and the skill matrices of the agents have been calculated. (C#)
- Implemented an interval tree to make the call assignment efficient instead of searching all the agents.

RightRez   May, 2014 - Aug, 2014
Bloomington, IN, USA   (Software Development intern)

- Implemented a BFS and A* search to find flights from a graph consists of 3 million flights (C#)
- Implemented several heuristics that reduced that searching time from 30 minutes to few seconds.
- Integrated Sabre webservice to implement seat map for airlines. (C#)

GenWeb2   Sep, 2012 - Jul, 2013
Dhaka, Bangladesh   (Senior Software Engineer)

- Implemented a 3D simulator for CNC machines. (C++, OpenGL, Qt)
- Calculated the minimum number of points to draw an arc based on the arc length. It reduced the CPU and memory usage by almost 90%

KB Group   Apr, 2010 - Sep, 2011
Dhaka, Bangladesh   (Software Engineer)

- Integrated payment gateways to KB Group e-commerce and post office box application. (C++, COM).
- Implemented a print server that generates PDF tickets and print them by specialized printers (C#)

Arista Enterprises   Apr, 2009 - Mar, 2010
Dhaka, Bangladesh   (Software Engineer)

- Implemented end-to-end transaction for an airline booking system (ASP.NET).

SDSL   Feb, 2008 - Mar, 2009

Dhaka, Bangladesh   (Software Engineer)

- Developed a map client for feature phones for AfriGIS map. Worked on zooming, panning, and caching map tiles. (J2ME).

PUBLICATIONS

- **MD Iftakharul Islam**, Javed I Khan "SAIL Based FIB Lookup in a Programmable Pipeline Based Linux Router." IEEE High Performance Switching and Routing (HPSR), 2019.

- **MD Iftakharul Islam**, Javed I Khan "Leveraging Domino to Implement RCP in a Stateful Programmable Pipeline." IEEE High Performance Switching and Routing (HPSR), 2019.

- **MD Iftakharul Islam**, Javed I Khan "A Network-centric TCP for Interactive Video Delivery Networks (VDN)." IEEE International Conference on Network Protocols (ICNP), 2017.

- **MD Iftakharul Islam**, Javed I Khan "Video Splicing Techniques for P2P Video Streaming." IEEE ICDCS workshop on Computer and Networking Experimental Research using Testbeds (CNERT), 2015.

SERVICES

- Reviewer of Journal of Computer Networks, Elsevier.

- Shadow reviewer of Journal of Network and Computer Applications, Elsevier.