MD Iftakharul Islam (Tamim)

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EDUCATION

PhD, Computer Science (expected in 2021, GPA: 3.82)
Kent State University, Kent, OH, USA.
Thesis: Routing table lookup algorithms in software and ASIC

BSc, Computer Science and Engineering (Jan 2008, GPA: 3.45)
Bangladesh University of Engineering and Technology (BUET), Dhaka, Bangladesh

PROGRAMMING SKILLS

C; C++; Java; C#; Python; Verilog; HTML; CSS; JavaScript

WORK EXPERIENCE

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

- Implemented several existing and new routing table lookup algorithms. Evaluated the algorithms with the routing tables from real core routers. Integrated the routing table lookup algorithms in Linux kernel (C).
- Developed a high-level synthesis tool that generates synthesizable Verilog from C code (C, Verilog).
- Generated the Verilog implementation of routing table lookup algorithms using high-level synthesis tools. Generated the physical chip layout from the Verilog using OpenROAD.
- Implemented router-assisted TCP such as RCP, XCP and NC-TCP in Linux kernel (C).
- Developed a GStreamer based video streaming application (C).
- Developed several experimental network topologies using Mininet (Python).

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

- Implemented a call dispatching mechanism of call centers where incoming calls are assigned to agents based on various criteria and skill metrics of the agents.(C#)
- Implemented an interval tree to make an call assignment efficient instead of searching all the agents.

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

- Implemented a flight search (BFS and A* search) in a graph of 3 million flight routes (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#)

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

- Implemented a 3D simulator of a CNC machine. (C++, OpenGL, Qt)
- Calculated the minimum number of points to draw an arc based on the arc length. It reduced the CPU and memory consumption by almost 90%
- Developed a backend of a mobile application that is used for charging electric cars. (Java, Postgresql)

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

- Implemented an end-to-end ticketing system for box offices. (C#, SQL Server)
- Integrated payment gateways to e-commerce and box office applications. (C++, COM, Classic ASP, SQL Server).

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

- Implemented an end-to-end airline ticket booking system (C#, ASP.NET, SQL Server, HTML, CSS, JavaScript).

Software Engineer, SDSL
Dhaka, Bangladesh (Feb, 2008 - Mar, 2009)

- Developed a map navigator for feature phones and windows mobile with AfriGIS map. Worked on zooming, panning and caching of map tiles and data. (J2ME, C#).

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 IEEE Journal of Selected Area of Communication (JSAC).

- Reviewer of Computer Networks, Elsevier.

- Shadow reviewer of Network and Computer Applications, Elsevier.

- TPC member of International Journal of Computing and Digital Systems

- TPC member of International Journal of Reconfigurable and Embedded Systems

Teaching

- Instructor of CS-III (Programming Pattern) from 2020-2021

- Lab instructor of CS-III (Programming Pattern) from 2017-2020

- Lab instructor of CS-I (Procedural and Object-Oriented Programming) from 2016-2017