Ashik Ahmed

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I am a DevOps engineer. I have more than 15 years experience working on cloud computing architectures on Linux platforms. I have built my career with start-ups to Bigtechs by developing infrastructure tooling, troubleshooting, system integration. As a DevOps & fullstack developer my primary objective is to ensure developer productivity and ensure system reliability in the mean time still maintain faster development cycle

PostGreSQL	SQL-Query	Indexing	Functions	PostGIS
scripting	GraalVM	shell	go lang	awk
Command Line	git ssh	wireshark	ip netstat ps	vi emacs
Linux	Archlinux	systemd	alphine	ubtuntu
JVM	Groovy	jetty	clojure	jdbc
Virtualiztoin	docker	KVM	kubernetes	ingress
reactjs	d3.js	react hooks	redux	animation

Made a successful server based deployment of Audio & video codecs (G729AB, AMR-NB, H263, H264) transcoding on debian based systems. Adopted of Groovy as shell script replacement. Restful API development with Reactjs worked with clojure, scala, phyton flux, websocket, gevent, sqlalkalemi. Implemented CPS and actor model for concurrency using go lang and erlang.	✓ **1 129 Software Global Consultancy //SGC (science 2018)**
Implemented Virtual Desktop Environment(VDE) for University Labs using KVM Libvert virtualization on Archlinux based hypervisor that hosts virtualized linux and windows desktops and docker for containerization on the server and desktop is replaced by ARM based SoC with vnc & rdp clients installed where students can access remote desktops and spawn docker based services on remote services	✓ **1 7 Fractals Labs (2016-2018)**
I have worked on device drivers on Linux kernel on Android based mobile handsets and patched linux kernel with device specific changes based on git, As well as fork and maintain specific version then merge it to upstream when stable. Applied three way git merging as well as merge conflicts, mastered on taking systrace I also received leadership training for very big teams of developers	**0 16 Lead Engineer - SAMSUNG R&D Institute Bangladesh (2011-2013)**
Developed and maintained mediation servers which was in a nut shell modern days micro services with lot of bells and whistle with Java, Oracle SQL, shell scripting, jetty, linux command line utilities - awk, ssh port forwarding and reverse proxy for remote server login and vi as remote editor. As well implemented push and pull based systems and services for monitoring alarms and IP packet tracing using wireshark	**0 13 System Engineer at GrameenPhone. (2007-2009)**
As a devOps on audio conferencing systems and I have worked with liunx, iptables, shell scripting, routing UDP packets over all type network environments, ssh and configure remote server using emacs editor. Worked with highly concurrent softswith routing with load balancing and priority queues, media gateways on CentOS and Ubuntu.	**1 117 Software Engineer - GENUITY Systems Limited (2006-2007)**
Fontend is developed with reactjs and webrtc with google doc like collaboration platform for data scientist and students. Developing backend services with ingress API gateway, kafka for messaging, groovy for connecting postgresql, kafka and fontend.	**0 35 Web based audio & video conferencing**
Packet Inspection and Auditing for malicious activities and Lawful Interception in Linux Kernel Space using eBPF technologies and systrace using shell scripting later successfully used groovy on GraalVM and PostGreSQL query optimization using join planing and indexing also used redis cluster for cashing frequent data. Develop react based data visualization using d3.js and Groovy based RESTful API backend.	**4 15 Deep packet Inspections (DPI)**
Collaboration between teachers and students is hard using web Camera and limited zoom experience. Data scientist uses virtual notebooks to collaborate between themself. I have develop similar experience that would rather focus on student productivity that made a simple and elegant way of writing equation on web at the same speed on pen and paper. Moreover I made it visually more appealing by making use of digital typography and making use of computer animation and develop ways where computer can assist students helping with their homework.	**0 2 Online classes on Virtual notebooks**
actor modle in scala to make it scalabe and configuration managed side mongodb nodejs with reactjs fontend with webrtc.	**6 225 Serverless end to end video conferencing and live Streaming with Edge processing v2 (from 2013)**
End to end low latency network connectivity solutions using network UDP whole punching technologies which is becomming standard in 2021/2022 not only for voice and video (SRT) but also in http3 (QUIC) where as streaming Vedeo providers like Google, zoom, facebook, twitch uses of TCP-based protocls like RTMP thus increase network latency.	**6 20 Serverless end to end video conferencing and live Streaming v1 (2006-2012)**

Tutorial: Communication Is Key - Understanding Kubernetes Networking - Jeff Poole, Vivint Smart Home	2022 Online
Online eBPF and Kubernetes: Little Helper Minions for Scaling Microservices - Daniel Borkmann, Cilium	2022 - Online
Webinar: Kubernetes and Networks: Why is This So Dang Hard?	2022 - Online
Online Intro + Deep Dive: Kubernetes (Network) SIG - Tim Hockin, Google	2022 - Online
Container Networking From Scratch - Kristen Jacobs, Oracle	2022 - Online
Kubernetes Networking Intro and Deep-Dive - Bowei Du & Tim Hockin, Google	2022 - Online
Demystifying Linux MIPI DSI Subsystem - Jagan Teki, Amarula Solutions	2022 - Online
Tutorial: Device Tree (DTS), Linux Board Bring-up and Kernel Version Changing 2018	2022 - Online
Building a container from scratch in Go - Liz Rice	2022 - Online
"Stop Writing Dead Programs" by Jack Rusher (Strange Loop 2022)	2022 - Online
Digital Design and Computer Architecture, ETH Zürich, Spring	2021 - Online
Introduction to Computational Thinking MIT 18.S191 aka 6.S083 aka 22.S092, Fall 2020 edition	2021 - Online
Differentiable Programming with Julia by Mike Innes.	2021 - Online
Siggraph2019 Geometric Algebra	2021 - Online
How I Design Programs, Jeremy Gibbons, Professor of Computing in the Department of Computer Science at the University of Oxford.	2021 - Online
The impact of differentiable programming: how ∂P is enabling new science in Julia ACM SIPGPLAN by Matt Bauman, Julia Computing	2021 - Online
The Beauty of Bézier Curves Freya Holmér	2020 - Online
Intro to Parallel Programming. John Owens University of California, Davis	2019 - Online
Probabilistic scripts for automating common-sense tasks by Alexander Lew PHD student on MIT Probabilistic Computing Projects	2019 - Online
The Do's and Don'ts of Error Handling • Joe Armstrong • GOTO	2018 - Online
Binomial distributions and Bayesian view by Grant Sanderson, MIT	2018 - Online
Erlang Master Class, Joe Armstrong	2017 - Online
Parsing With Derivatives David Nolen	2017 - Online
Delimited Continuations for Everyone by Kenichi Asai Ochanomizu University	2017 - Online
MIT 6.001 Structure and Interpretation	2016 - Online
2015 Introduction to Dependent Type Theory — Robert Harper University of Oregon	2015 Online
Introduction to Computer Graphics - UC Davis Academics	2015 - Online
Tutorial: Building the Simplest Possible Linux System - Rob Landley, se-instruments.com	2015 - Online
Logic Programming, Core.Async Timothy Baldridge	2015 - Online
Online Online Use Least Squares method for Mathematically Darkened Colors.	2015 - Online
Online 8.01x - MIT Physics I: Classical Mechanics by Walter Lewin	2014 - Online
Public / Private Keys and Signing - Anders Brownworth	2014 - Online
Pixar in a Box - Khan Academy	2014 - Online
Samsung Device driver programming on SNMC	2011 - Delhi

My CGPA was 3.69 out of 4, I have participated NCPC and ICPC programming contests. My final project was - Design project modeled and verified a multi-cycle and 5-stage pipelined version of 32-bit RISC processor - MIPS - with Verilog Hardware Description Language (HDL)	**1 27 BSC on Computer Engineering. American International University Bangladesh (AIUB) (2001-2005)**
I was raised and born on noble family in Bangladesh. My late father was an liberwation war veteran. I passed secondary and higher Secondary from Rajshahi Cadet College. 1998-2000	**0 25 Personal Summery**