

# Hasan-Uz-Zaman Ashik

Websites: Blog: [autonetmate.com](http://autonetmate.com)  
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## Education

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**B.Sc. Electronics & Communication Engineering** **2014 - 2018**  
Khulna University of Engineering & Technology (KUET), Bangladesh.  
Graduation date: 15 March 2018. CGPA: 3.10 Out of 4.0 (Last semester 3.67).

## Skills

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Programming / Scripting Languages	Python, Flux, JavaScript, Bash
Databases (TSDB+RDBMS)	PostgreSQL, MySQL, InfluxDB, RRD, Prometheus
SDN	OpenDaylight, Mininet.
Web Application	Django, React, WordPress.
DevOps	GitHub Actions, GCP, AWS, Nginx, Kubernetes (K3S), Docker, Linux.
NMS	Telemetry, SNMP, Syslog-ng, Telegraf, Grafana, Cacti, Nagios.
Networking device configuration (CLI)	Cisco, Huawei switch, routers & GPON. Service Provider network (MPLS, OSPF, BGP, VLAN, SD-WAN)
Version Control Tool	Git, GitHub
Agile tool	ClickUp

## Employment

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**Network Engineer** **Jun 2022 – Present**  
**Senior Engineer** Sep 2022  
IP Transmission Network, Fiber@Home Limited, Bangladesh.  

- Network monitoring tools development.
- Django web app, python scripts development for network automation and auditing.

**Network Engineer** **Dec 2019 – Jun 2022**  
IP Transmission Network, Fiber@Home Limited, Bangladesh. (2 yrs 7 mos)  

- Service provider network troubleshooting (BGP, IGP-OSPF, MPLS, L3VPN, L2VPN)
- Cisco, Huawei vendor device service provisioning; GPON network troubleshooting.

## Conference Talk

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**South Asian Network Operators Group Conference-39** **9<sup>th</sup> May 2023**  
Presented Visualizing Telemetry with TIG - Deployment and Concepts  
Link: <https://youtu.be/YhNGvZ6dNHQ>

## Conference Publication

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H. Ashik and A. B. M. Aowlad Hossain, "Simultaneous Transmission of Biomedical Signals Using DS-CDMA," 2018 International Conference on Innovation in Engineering and Technology (ICIET), 2018, pp. 1-6, DOI: 10.1109/CIET.2018.8660800.  
Link: <https://ieeexplore.ieee.org/document/8660800>

## Projects

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### Professional Projects:

**Network Topology** | React, Express, NodeJS, PostgreSQL, LLDP, Python **Jan 2024**

- Collected network neighbor info using LLDP, Python and stored in DB.
- Using Express exposed info from DB.
- Using React developed network topology.

Project recording: [https://youtu.be/Jtmmm\\_fECTc](https://youtu.be/Jtmmm_fECTc)

**Network Automation & Alarm Tool** | Django, Docker, Nginx, PostgreSQL, Python **Sep 2022**

- Collected network info from devices using python, SNMP, stored in DB.
- Collected utilization and optics data from vendor provided and own developed NMS stored in DB.
- Developed several reporting to aid other internal teams.
- Developed alarm dashboards for NOC and operations for handling network incidents.
- Auto device configuration pushing from Django web tool to automate service configurations.

Project recording: [Available on demand](#)

**SDN R&D** | 6 Months | Python, Java, Rest API, Linux **Jan 2022**

- Deployed ODL controller with Mininet virtual network, and Cisco routers using BGP-LS.
- Java, REST API-based nodes information collection from the controller.
- Utilized OpenFlow Manager to manipulate flows in OpenFlow devices.
- Developed python script to build custom Mininet, and NetworkX K-ary tree topologies.
- Implemented flows in devices to drop ICMP echo to achieve one directional ping.
- Mininet network link capacity changing dynamically based on utilization using python Rest API.

**Monitoring** | Python, gRPC, InfluxQL, Flux, **Aug 2021 - present**  
Telegraf, InfluxDB, Grafana, PostgreSQL

- Used telemetry to collect matrix from cisco devices using gRPC, and TCP in the transport layer
- Used Telegraf as a data collection pipeline, stored them on Influx-DB, and visualized data in Grafana.
- Developed python script to generate a report of bandwidth usage stored in Influx DB.
- Developed alert generation system for optical power of networking devices.
- Developed monitoring dashboards for Linux VMs performance monitoring.

**Syslog development** | 3 Months | PostgreSQL, PHP, SNMP **Jan 2021**

- Deployed Syslog-ng log storage system for different vendor network devices.
- This tool helps network personnel to troubleshoot events when issues occur.
- Developed a web app from where log data can be searched using device IP and log pattern.

Link: [autonetmate.com/log-analysis/syslog-setup-and-collect-logs-from-cisco-huawei-switch-router/](https://autonetmate.com/log-analysis/syslog-setup-and-collect-logs-from-cisco-huawei-switch-router/)

### Other Projects:

**Linux namespace ping using bridge and visualize packets in browser** **Jun 2023**

- NodeJS app is developed to see realtime packet passing through bridge interface that connects two namespaces. Link: <https://autonetmate.com/software/real-time-packet-capture-of-linux-bridge-ping-namespaces-and-display-with-websocket/>

**Full-Stack web application with React, Node.js, Redis, And MySQL** **Jun 2023**

- Redis is used as both cache and PUB/SUB model to assign task to worker
- Client can create and get data using API.

Link: <https://autonetmate.com/software/rapidconnect-full-stack-web-application-with-react-node-js-redis-and-mysql/>

## Training & Certification

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### **InfluxDB, Flux, Telegraf Basics**

**Feb 2023**

[university.influxdata.com](http://university.influxdata.com)

Topics: Fundamentals of InfluxDB, Data Collection with Telegraf, Querying with Flux.

### **Cisco Certified Network Associate Routing & Switching (CCNA)**

**2020**

[Online Verification link](#) Score: 895 Out of 1000 Points.

Topics: Network Fundamentals, LAN Switching, Routing, WAN, Infrastructure Service, and Security.

### **LICT Web Development** | Project of Bangladesh Computer Council (BCC)

**Dec 2017**

Certified by George Washington University, USA.

Topics: Web development implementing PHP, MySQL Database, and WordPress CMS.

### **Graphics Design**

**Jan 2016**

IICT, Khulna University of Engineering & Technology (KUET), Bangladesh.

Topics: Adobe Illustrator & Photoshop.

## Participations

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### **South Asian Network Operators Group Conference-39**

**May 2023**

Presented Visualizing Telemetry with TIG - Deployment and Concepts

Link: <https://youtu.be/YhNGvZ6dNHQ>