

Akshat Sinha

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EDUCATION

IIIT-DELHI

B.TECH IN COMPUTER SCIENCE

Aug 2014 - May 2018 | Delhi, IN

Cum. GPA: 8.76

ST. COLUMBA'S SCHOOL

Grad. May 2013 | New Delhi, India

LINKS

Github:// [akshatgit](#)

LinkedIn:// [akshat-sinha](#)

DBLP:// [Akshat-Sinha](#)

UNDERGRADUATE

Fundamentals of Computer Security

Network Security

Security Engineering

Software Defined Network

Statistical Computing

Embedded Logic Design

Advanced Topics in Mobile Computing

Wearable Computing

Graph Theory

Information Retrieval

Teaching Asst

Systems Management

SKILLS

PROGRAMMING

Over 5000 lines:

Python • C • Java

Over 1000 lines:

Shell

TOOLS

Databases

Redis • MongoDB • MySQL

Pub/Sub

Kafka

Monitoring

Nagios • Prometheus

Icinga • Graphite • Grafana

Web-framework

Flask • Django

Orchestrators

Nomad • Kubernetes

Misc

HAproxy • Puppet • Jenkins

Docker • AWS • GCP

GCP • Kubeflow • Seldon

EXPERIENCE

MEDIA.NET (FORMER DIRECTI) | SRE

June 2018 – Present | Mumbai, IN

- Setup Nomad cluster using Consul for auto-discovery of servers.
- Moved production stateless Applications to Nomad
- Worked on monitoring and alerting system for the company. The stack consisted of Nagios, Icinga, Prometheus, Graphite and Pagerduty.
- Explored Kubernetes for creating POC of micro services architecture. Used Jenkins to create Blue-Green deployment system with version control of service.
- Handled data pipeline for the team. Used Kafka, Redis and Hadoop for the task.
- Metric/Logging pipeline setup with Graphite and ELK.

IIT MADRAS | RESEARCH INTERN

MENTOR: DR. B.RAVINDARAN AND DR. KARTHIK RAMAN

May 2017 – Jun 2017 | Chennai, IN

- Clustering protein-protein interaction(PPI) network using deep learning and non deep learning methods

RESEARCH

NETWORK SECURITY LAB | UNDERGRADUATE RESEARCHER

MENTOR: DR. SAMBUDDHO CHAKRAVARTY

May 2017 – May 2018 | IIIT-Delhi, IN

The project consist of detecting various censorship methodologies employed by different ISPs in India, and in the second part we evaded censorship in all ISPs.

Publication: Where The Light Gets In: Analyzing Web Censorship Mechanisms in India. **IMC 2018**

CVML LAB | UNDERGRADUATE RESEARCHER

MENTOR: DR. CHETAN SHARMA AND DR. ANUBHA GUPTA

May 2016 – Aug 2016 | IIIT-Delhi, IN

Segmenting the 3-D volume image into 4 Region of Interest.

Publication: Deep neural networks for segmentation of basal ganglia sub-structures in brain MR images. **ICVGIP 2016**

OTHER PROJECTS

SIMPLE LOAD BALANCER FOR SDN

MENTOR: DR. VINAYAK NAIK

Project was divided into three parts, first, discover the network topology, then, compute shortest and second shortest path for each pair of nodes and finally divide the traffic between all nodes. Used Ryu controller with mininet.

PACKET LOGGER KERNEL MODULE

MENTOR: DR. SAMBUDDHO CHAKRAVARTY

Implemented a simple kernel module to intercept incoming packets and detect TCP reconnaissance packets that can be generated using nmap.

IRC CHAT APP

MENTOR: DR. SAMBUDDHO CHAKRAVARTY

Implemented Internet relay chat app in C++ with secure features such as encrypted payload and Kerberos like key distribution center.