

# Muhammad Saqib

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## EDUCATION

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- **National University of Computer and Emerging Sciences** 2012 – 2016  
*BS Computer Science, CGPA: 3.03/4.0*
- **Ayesha Bawany Govt. College** 2010 – 2012  
*Inter Pre-Engineering, 76% marks*

## EXPERIENCE

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- **Cloud9 Networks FZE** Karachi  
*Sr. Software Engineer* July 2016 - Present
  - **Cloud Monitoring System:**
    - \* Research and solution design for Openstack private cloud infrastructure and services monitoring.
    - \* Development of the proposed design that included sandboxed Lua plugins for Heka([github.com/mozilla/heka](https://github.com/mozilla/heka)) and python plugins for collectd for data collection and processing. Elasticsearch, Logstash and Influxdb for data storage and retrieval and Kibana for visualization.
    - \* Building grok and LPeg patterns for various services of Openstack cloud: for parsing of machine data into fields for fast retrieval and visualization.
    - \* Security testing and best practices.
    - \* Built puppet modules and manifests for 1-click deployment.
  - **Network Monitoring System:**
    - \* Competitor Research and analysis of trends in the domain.
    - \* Implementing POC solutions with OSS tools and demonstrate them to decision makers.
    - \* Design, development and integration of opensource tools and in house built addons for network monitoring: Including time series data storage, visualization and reporting.
    - \* Elasticsearch, Logstash and Kibana for storage/retrieval,parsing, and visualization of Syslog data from devices ranging from Power distributors to core switches.
    - \* Supporting deployment engineer and troubleshooting problems in production.
  - **PNDA Project:**
    - \* Deployed PNDA Big data network analytics toolchain with Openstack cloud.
    - \* Troubleshooting of various SaltStack scripts and declarative states in the deployment process.
    - \* Providing support to various users of the opensource tool with problems in Openstack platform.
  - **Big Data Analytics Engine:**
    - \* GUI development with Angularjs framework 1.0.
    - \* Writing REST API methods in Java Spring.
    - \* Design and deployment of Hadoop cluster,and data streaming from JDBC to HIVE.
    - \* Deduplication of records in HDFS by scheduling Apache Oozie cron job.
  - **KPK Colleges centralized wifi access system:**
    - \* Analysis, design and implementation of the solution with MERN stack.
    - \* Lead the development team.
    - \* Using Git for version control and CICD with git hooks.

## SKILLS

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- Engineer robust systems with minimalist design and clean code.
- Hands-on expertise with Docker and Kubernetes for deployment of containerized apps on cloud:AWS, Azure,GCP and Heroku.
- Developed Hadoop programs in Java and worked with Kafka, Zookeeper, Hive, Impala for reporting in HDFS.

- Experience with React and Angularjs.
- Lead a team of trainee engineers.
- Experience with Python and ML toolchain: Pandas, Numpy and Keras.
- Distributed system design and programming in **MPI, Nvidia CUDA and OpenMP.**
- Practical knowledge of load balancers and HA.
- Knowledge of **Hypervisors** and SDN with **Openvswitch.**
- Experience with relational, NoSql and Time-series databases.
- Hands on with Java, Python, JavaScript and C++.

## OTHER PROJECTS

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- **Sokoban Solver:** Solving Sokoban puzzle(NP-complete problem) with machine learning. Designed a recurrent neural network and generated data using SAT solver.<http://thesai.org>
- **GRPC API:** Todo-list GRPC API with Nodejs and Mongoddb.
- **System programming:** Built virtual machine cluster for MPI and bare metal distributed Hadoop cluster at HPC lab, FAST-NU.