

# 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*

## PROGRAMMING SKILLS

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- **Languages:** Java, Python, JavaScript, , C++, Php, C#, SQL.
- **Design frameworks:** Spring, Express, React, Flask.

## EXPERIENCE

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- **Cloud9 Networks FZE** Karachi  
*Sr. Software Engineer* July 2016 - Present
  - **Cloud Monitoring Software:**
    - \* 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 solutions with OSS tools and demonstrate them to decision makers.
    - \* Design,development and intergration 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 PDUs 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 Govt. colleges centralized Internet 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.
- 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.
- Distributed system design and programming in MPI, Nvidia CUDA and OpenMP.
- Practical knowledge of load balancers and HA.
- Hypervisors and SDN: Esxi, KVM, Openvswitch.
- Relational, NoSql and Time-series databases: Mysql, MSSQL, MongoDB, Influxdb, Elasticsearch.
- Reporting tools: BIRT, JasperReports.
- Automation: Puppet, Ansible, SaltStack.

## OTHER PROJECTS

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- **Sokoban Solver:** Solving sokoban puzzle(NP-Complete problem) with machine learning. Designed a recurrent neural network and generated input with SAT solver. <http://thesai.org>
- **GRPC API:** Built a simple GRPC CRUD API with Nodejs and MongoDB.
- **Systems programming:** Built virtual machine cluster for MPI and bare metal distributed Hadoop cluster at HPC lab, FAST-NU.