Muhammad Saqib

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EDUCATION

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

PROGRAMMING SKILLS

- **Languages**: Python, Javascript, Java, C++, SQL.

- **Design frameworks**: Spring, Express, Reactjs, Flask.

EXPERIENCE

- **Cloud9 Networks FZE** — Karachi
  Sr. Software Engineer — *July 2016 - Present*

  - **Cloud Monitoring Software**:
    * Research and solution design for Openstack private cloud infrastucture and services monitoring.
    * Development of the proposed design that included sandboxed Lua plugins for Heka(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**:
    * Competetor 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.
    * Troubleshootiing 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.

  - **Govt.KPK Colleges Internet Access Request 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

- Expertise in Linux, Docker and Kubernetes for deployment of containerized apps on cloud: AWS, Azure,GCP and Heroku.

- Map-reduce programming in Java and worked with Kafka, Zookeeper, Hive, Impala for data steaming and reporting.

- 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

- **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.