

# Muhammad Saqib Arfeen

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## EDUCATION

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- **National University of Computer and Emerging Sciences - FAST** Karachi, PK  
*Bachelor of Science in Computer Science; GPA: 3.03/4.0* Aug. 2012 – Jun. 2016

## PROGRAMMING SKILLS

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

## COURSEWORK

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- Artificial Intelligence, Machine Learning, High Performance Computing, Computer Graphics, Neural Networks.

## EXPERIENCE

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- **Cloud9networks FZE** Karachi, PK  
*Software Engineer* Jul 2016 - Present
  - **Trace9:** It is a software system that monitors thousands of customer premises network devices, typically for an ISP. It collects and stores metrics, and graphs and charts are built for trending data, with alerting and ticketing.
  - **Observer9:** It is a monitoring system for Openstack cloud. It works in distributed mode and collects, parses and aggregates log data and system metrics from Openstack cloud nodes. It has data visualizations using Grafana and Kibana.
- **National University of Computer and Emerging Sciences - FAST** Karachi, PK  
*Research and Teaching Assistant* Jan 2015 - Dec 2015
  - **Research Assistant - Machine Learning:** Research on machine learning for puzzle solving. Coded a prototype in python and trained it with keras and tensorflow on gpu. <http://dx.doi.org/10.14569/IJACSA.2017.080364>
  - **Teaching Assistant - Theory of Automata, Introduction to Algorithms:** Grading of class assignments and compilation of final grade sheets. The class strength was 150 and 100 students respectively.

## PROJECTS

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- **Data Engine:** Data analytics solution capable of streaming data from various sources and store and analyze it in HDFS, using Java Spring, JSP with Angularjs.
- **Openstack cloud monitoring:** Created a logging monitoring and alerting solution that parses, transforms and aggregates ingested log data with Logstash and Heka and then indexes it in Elasticsearch.
- **Sokoban Solver:** A puzzle solver with machine learning. Designed a recurrent neural network and python scripts that generated training data using a SAT solver.
- **Big data clusters:** Created virtual machine and bare-metal clusters for MPI and Hadoop mapreduce in HPC lab.