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Curriculum vitae

PERSONAL INFORMATION	**Muhammad Yaseen**

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WORK EXPERIENCE

19 Dec 2016–Present

Machine Learning Engineer

Gaditek, Karachi (Pakistan)

At Gaditek I am working on company's flagship product PureVPN (purevpn.com).

■ My responsibilities include:

- Developing Extract-Transform-Load (ETL) to Machine Learning (ML) pipelines.

- Designing, executing and interpreting ML experiments, presently related to customer segmentation and churn.

- Managing current Apache Spark cluster and Apache Flume deployments.

- Coordinating with marketing, sales, and customer success teams to identify potential avenues for improvement.

■ Achievements and Contributions:

- Deployment of company's first Apache Spark cluster, currently in use for ML and ETL applications.

- Deployment of company's first Apache Hadoop cluster, currently in use for storage, archiving, reporting and as data source for ML algorithms.

- Selection of Big Data, ML technology stack and developing company's first ML pipeline from PoC to production use.

Jun 2016–Aug 2016

Research Internship

Deutsches Forschungszentrum für Künstliche Intelligenz (DFKI), Kaiserslautern (Germany)

During my internship at DFKI I learned:

■ Frameworks and libraries for ML e.g. Tensorflow, Keras, RapidMiner and SKLearn.

■ Machine Learning techniques including Long Short-Term Memory Networks for and Neural Networks for regression and classification

■ Presentation skills, communication and working with multicultural/international teams in a technical and professional context.

Jun 2015–Dec 2016

Research Assistant

Research Center for Artificial Intelligence, NED University, Karachi (Pakistan)

At RCAI, I worked chiefly on following 3 projects:

■ Smart Oximeter: In this project I worked on a bluetooth enabled low-power oximeter which measures blood-oxygen level and heart rate. My responsiblities included: testing the PCB, writing code (C/C++) for interfacing the hardware components, and filtering raw sensor output. I also developed an Android app (Java) for operating oximeter via smart-phone. This project also won $500 prize in DICE Health Innovation (2015). (weblink)

■ Smart Warehouse: In this project I worked on a device which helps warehouse workers avoid accidental injury-causing encounters with automated heavy-machinery and tools. My work included writing code (C/C++) for hardware interfacing. I also delivered presentations at several forums to demonstrate the project. (weblink) (post)

■ Smart Agriculture: In this German Academic Exchange Service (DAAD) funded project, as part of hardware design team I worked on several prototypes based on different arduino and custom

boards.

| Jan 2015–Apr 2015 | **Research Student** |

Electronics Design Center, NED University, Karachi (Pakistan)

In Electronics Design Center I was responsible for:

- Hardware-Software interfacing, testing and debugging.
- Software development for embedded systems in C/C++.

| Aug 2012–Oct 2014 | **Remote Web Developer** |

I worked remotely with Islamabad-based developer on several freelance projects, my work included:

- Developing static, dynamic, and database driven web applications
- Developing web apps based on Google Web Toolkit (Java), ASP.NET MVC, jQuery, PHP, HTML and CSS.

EDUCATION AND TRAINING

| Jan 2013–Jan 2017 | **Bachelor of Engineering in Computer and Information Systems** |

NED University of Engineering and Technology, Karachi (Pakistan)

- **7th Position out of 148, Top 5%. CGPA 3.848 / 4.0**
- Related Courses:
    - Artificial Intelligence, Database Management Systems
    - Probability and Statistics, Linear Algebra, Calculus
    - Distributed Systems, Computer Communication Networks
    - Object Oriented Programming, Software Engineering
- Final Year Project:
    - Power efficient sensor node design for Wireless Sensor Networks (WSNs)
- Received and held 4 years Hakim Mohammad Saeed Memorial Scholarship by Hamdard Foundation Pakistan for university studies.

Completed Online Courses

- Machine Learning by Stanford University on Coursera
- Taming Big Data with Apache Spark and Python on Udemy
- Deep Learning: RNN in Python on Udemy
- Hadoop Platform and Application Framework by University of California: San Diego on Coursera
- Bayesian Statistics: From Concepts to Data Analysis by University of California: Santa Cruz on Coursera
- Complete Guide to Elasticsearch on Udemy

| 2011–2012 | **Higher Secondary School Certificate (Pre-Engineering)** |

Adamjee Government Science College

- **Passed with 86.91%**
- Received certificate and medal of merit by the principal of college.
- Received and held 2 years Hakim Mohammad Saeed Memorial Scholarship by Hamdard Foundation Pakistan for college studies.

| 2009–2010 | **Secondary School Certificate (Science group)** |

Fine Future Public School

- **Passed with 91.88%, 12th position in Karachi city-wide examination.**
- Top position in the school.
- Received cash prize for merit from Board of Secondary Education, Karachi.

PERSONAL SKILLS

Job-related skills

General Programming:

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    - Python, Java, C/C++, C#, PHP

Machine Learning and Big Data:

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    - Tensorflow, Keras, and Scikit Learn
    - Apache Spark and Spark MLLib
    - Apache Hadoop
    - Apache Flume
    - Familiarity with Apache Hive and Elasticsearch

Web Development:

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    - Web development with PHP and ASP.Net MVC
    - MySQL, SQL Server
    - HTML, CSS, AJAX, jQuery

Digital skills

- Professional proficency in Linux OS (CentOS, Ubuntu, Linux Mint)
- Version Control Systems (Git)
- Software project management tools (Assembla, Github, BitBucket)

ADDITIONAL INFORMATION

Honours and awards

- Won National ICT R&D Fund award for Bachelor's Final Year Project
- Among top 10 scorers in European Space Agency's ML related Mars Express Power Challenge
- Won 2nd Position at DICE Health Exhibition and Competition (2015) for Oximeter project.
- Won 1st Position in Speed Programming competition while leading the team at University of Karachi.

OpenSource contributions

- Apache Flume Plugins (github.com/muhammadyaseen/flume-plugins)
- Chrome Urdu OCR extension (github.com/muhammadyaseen/ustad)
- Awesome ML (contributor) (github.com/muhammadyaseen/awesome-machine-learning)

Publications

"A Smart Safety Gadget Design to Avoid Accidents in Warehouse Environment" in proceedings of 1st International Electrical Engineering Congress, 2016, Karachi, Pakistan.