

Afshan Aman

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Introduction

I am currently working as a Software Engineer/Data Analyst at the Center for Technology and Economic Development (CTED: <http://www.nyucted.org>) at New York University Abu Dhabi. Our focus of research is in the area of utilizing technology for economic development of the under-developed areas in Africa, mainly in the fields of agriculture and food production, and mobility of goods. As a senior technology and solution developer and data analyst for several projects, I work with a vast array of Engineering, Statistical and Geo-spatial computer applications and software packages. I manage the acquisition of large sized statistical, socio-economical, and spatial data using Android devices and Web interfaces, as well as analyses, visualization and report generation of said data using Web interfaces, STATA®, MATLAB®, and QGIS/ArcGIS®. I also design and develop dynamic Web-based analysis tools for the data provided by stakeholders or collected by team members in the field. Over the years, I have acquired the following:

Specialties: Software Development; Full Stack Web Applications Development; Data Analysis and Visualization.

Skills:

- JavaScript (ES6), jQuery, HTML5, CSS3, Node.js v8.4, PHP, Vue.js, PostgreSQL, MongoDB, JSON for Dynamic Web Development;
- AWS' S3 and EC2, EBS Management and development for cloud-based systems;
- GitHub for Version Control;
- Java, XML for Android Application Development;
- STATA, QGIS for Spatial and Socio-economic Data Analysis;
- C/C++, Matlab® for embedded systems/research/scientific Application Development

Interests: Big Data, Hadoop®, Amazon Web Services, and Tableau®

Current Work Experience

May 2012 – to Date

New York University

Abu Dhabi, UAE

In a progressively responsible role, starting with research and data analysis, to becoming the senior Software Developer and finally the Tech Team Lead, my role involves resource coordination, people management and project planning and scheduling.

People and Project Management:

- Dividing high level TODOs into achievable atomic tasks, Task definition & assignments, and making sure deadlines are met
- Deciding on tasks duration and their completion times
- Code Quality Assurance/Standards enforcement, & producing and maintaining documentation
- Participating in recruitment of software developers and support staff
- Gradually introducing agile project management methodologies to the whole team
- Training of team members to adopt the SCRUM practices

Software Development:

- Developing Android applications for GPS data collection in the area of agriculture and food transportation and developing systems to visualize and analyze the data and help the policy-makers in decision making.

- Developing dynamic web applications using Nodejs, Vuejs and MongoDB/PostGIS, for analysis and visualization of spatial data collected using our Android Apps.

Data Analysis:

- Studying large sized statistical, socio-economical, and spatial data either collected through surveys, specialized devices (such as sensors, accelerometers) or smart phones applications (Apps) or available on the web, using STATA, MATLAB, and ArcGIS/QGIS.
- Assisting the Principle Investigator in research by handling statistical data analysis of the mobility of migrant workers in the Middle East and Asia.

International Research and Development Experience

Jan 2010 – April 2011 **Faculty of Engineering, University of Porto** **Oporto, Portugal**

- Worked as a researcher in the field of Urban and Regional Transportation Systems and Planning, studying the retail locations of selected sectors in the city of Oporto using spatial analysis and GIS for identifying interesting patterns and discovering and testing hypothesis.

April 2008 – Oct 2008 **RWTH Aachen University, Germany** **Aachen, Germany**

- Developed a Web Portal for Conference registration and private and protected data management for the registered users using PHP and MySQL on Apache Server.

Jan 2004–Sep 2004 **United Nations Development Program** **Peshawar, Pakistan**

- Managed the development of Provincial Government Web Portal and establishment of District Citizen Information Centers (DCIC).
- Supervised the construction and renovation work for establishing the DCIC. Handled all correspondence with contractors.
- Supervised regular data collection, processing, analysis and dissemination of information at district level
- Handled Procurement activities for different sub-offices, developing IT related specifications, inviting and finalizing tenders and issuing inspection reports as a subject specialist.
- As part of a team of experienced statisticians and ICT specialists and young professionals, identified information needs of the DCIC project, designed a system, using ICT (Information and Communication Technologies) for improved transparency and accountability of state functionaries and access of citizens to information.

Education

MSc, European Master in Informatics (EuMI) **Germany/Italy** **2006 - 2008**

- A double-degree Master's program from two lead European universities of RWTH Aachen, Germany and University of Trento, Italy
- Specialization: Embedded Systems Informatics.
- Thesis Title: '**Efficient Implementation of a Simple Platoon Controller using a Rapid Control Prototyping System**' which, simply put, is a longitudinal cruise controller, but in the context of a group of vehicles travelling together over a longer distance, such as a convoy of military vehicles or Cargo trucks.

Language Proficiencies

Main Language	Mother Tongue	Others (Read & Write)
English	Urdu, Pushto	German, Italian, Arabic

Publications

1. '[Experiences in designing a mobile GIS mapping tool for rural farmers in Ghana](#)'. Proceedings of the 4th Annual Symposium on Computing for Development, 28:1-28:2 (2013)

Online Profiles:

GitHub: <https://github.com/afshanaman81>
Portfolio: <https://afshanaman81.github.io>
LinkedIn: <https://ae.linkedin.com/in/afshan-aman>

References

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