OMAIR SHAHZAD ALAM
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EDUCATION

University of Richmond, Richmond, VA ***May 2017***
Bachelor of Science in Computer Science with a double major in Physics; GPA: 3.91/4.0.

AWARDS AND RECOGNITIONS

- Simulation code added to official Jefferson Lab (US National Laboratory) Repository. ***September 2015***
- Co-authored Jefferson Lab paper for changes made to a Monte Carlo event generator. ***August 2014***
- United States Department of Energy Grant for conducting Nuclear Physics Research. ***April 2014***

PROJECT AND RESEARCH EXPERIENCE

Wolfram Research - Champaign, IL ***June 2017 - Current***
Lead Framework Developer
Designing, implementing and maintaining an Enterprise Resource Planning (ERP) framework

- Simplified data entry workflows by customer service by 50% by creating an inference engine that can do constant time field completion.
- Sped up employee lookup by 70% by creating a company directory that uses a natural language interface to specify employees and organizations by an abundance of qualifiers.

AuthX Consulting – Richmond, VA ***May - July 2016***
Software Engineering Intern
Improved resourcing and internal administration of AuthX employees by the following optimizations:

- Fully automated a manual 10 step process for obtaining and statistically analyzing data from user accounts in Forecastapp.com into a one-click feature of a Java applet.
- Improved central control and access of Java applets in Hippo Content Management Systems (CMS) by setting up a migration process thereby minimizing redundancies by 20%.

University of Richmond Department of Physics – Richmond, VA ***May - August 2015***
Research Assistant
Designed and tested a new dual liquid deuterium and hydrogen target to be used in particle accelerator experiments using the following tools and techniques:

- Automated the input and processing of 25 parameters into Geant4 Monte Carlo Simulation, a C++ based simulation framework, by defining target geometries using Perl Scripts.
- Improved target maneuverability by defining the positions of sub-structures relative to larger structures thereby reducing the commands required to reorient the structure from 56 to 1.

Jefferson Lab – Newport News, VA ***May - August 2014***
Software Development Researcher
Improved simulation software used by Nuclear Physicists to characterize the internal structure of electrons by the following alterations:

- Standardized the format of the output of an event generator to the LUND format to make it universally acceptable input for simulation software and increase its scope of usage.
- Significantly increased portability of the event generator by combining 6 local libraries into 1 comprehensive library.