Shabbar Raza

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Education

Jacobs University — *Bremen, Germany*

Pursuing B.S. in Computer Science, graduation expected in June 2017 — *08/2014 - PRESENT*

- Notable Courses: Algorithms and Data Structures, Formal Languages and Logic, Computability and Complexity. Machine Learning. Operating Systems Lecture and Lab. Programming in C++. Programming in Java. Software Engineering Lecture and Lab. Statistical Concepts and Data Analysis. Databases and Web Applications. IT Management

Keynesian Institute of Management and Sciences (KIMS) — *Lahore, Pakistan*

Cambridge International General Certificate of Education A Level - 3 As — *08/2012 - 08/2014*

- Second Highest Achiever in class

Garrison Academy for Boys — *Lahore, Pakistan*

Cambridge International General Certificate of Education O Level - 10 A*/As, 1b — *08/2008 – 08/2011*

- Highest Achiever

Project Experience

Software for finding alignments among mathematical libraries — *Jacobs University, Bremen*

Guided Research - Bachelor Thesis — *04/2017 - 08/2017*

- Carried out research in construction of mathematical libraries represented in MMT and on the topic of alignments.
- Wrote an algorithm that outputs alignments among mathematical theories from different libraries.
- Wrote a word segmentation algorithm using dynamic programming approach, and different string comparison and normalization algorithms.
- Wrote an algorithm that outputs names of identifiers from four different mathematical libraries using MMT.

Maze Runner Robot — *Jacobs University, Bremen*

Software that enables a robot with a laser range finder to autonomously find its way out of a maze — *03/2016 - 04/2016*

- Wrote separate packages for parsing and analysis of scanned data from sensors, and for physical execution of decisions.
- Learned and practiced software modularization, testing, documentation, and project management methodologies.
- https://github.com/JacobsUniversitySELab2016S/se-lab-team-6

MUNManager — *Jacobs University, Bremen*

A web application as a management platform for the attendants and organizers of MUN conferences — *10/2015 - 12/2015*

- Designed and implemented the database and wrote queries for specific tasks.
- Used GoogleMaps API with JavaScript to add one-click display of geographical location of the MUN conferences.
- Used JQuery with Bootstrap for pop-up forms, sliding menu, and navigation between sections.
- https://github.com/nickles-lee/ConCordinate

MusicBall — *Jacobs University, Bremen*

An audiovisual musical instrument — *01/2016 - 01/2016*

- Designed and implemented an application that produces different sounds and corresponding visual effects upon different inputs.
- Learned to program sounds and graphics, and to use object classification in a new domain while working with Processing.
- https://github.com/mgladkova/musicBall

Practical Experience

Voluntary Intern — *Bremen, Germany*

DFKI - Robotics Innovation Center — *06/2016 - 08/2016*

- Worked on describing, and modelling of robot components using URDF and Solidworks.
- Worked on documentation of a software which served as prototype implementation of a paper on robotic simulations.

Intern

FRAUNHOFER - MEVIS

Bremen, Germany

06/2016 - 08/2016

- Worked on building a web application using Django framework.
- Wrote installation scripts for a server setup for both Ubuntu and Windows.

President - Undergraduate Student Government (USG)

JACOBS UNIVERSITY

Bremen, Germany

09/2016 - 09/2017

- Leading the Undergraduate Student Government which is the representative organization of all undergraduate students at Jacobs University Bremen.
- Facilitating all communication between the administration and the student body.
- Working on several reforms at various levels, affecting the USG, the student body, and the University.

Intercultural Trainer

JACOBS UNIVERSITY

Bremen, Germany

08/2015 - 08/2016

- Trained freshmen about intercultural competencies and taught them skills on how they could survive and thrive in a multicultural and academically challenging community such as Jacobs.

Student Assistant - Summer Camp Life Sciences 2015

JACOBS UNIVERSITY

Bremen, Germany

05/2015 - 05/2015

- Organized and facilitated the execution of all social activities and events at campus, and excursions off-campus for a diverse group of accomplished participants.

Instructor at LUMS Model United Nation (LUMUN) - Social Responsibility Program

LAHORE UNIVERSITY OF MANAGEMENT AND SCIENCES (LUMS)

Lahore, Pakistan

06/2013 - 07/2013

- Designed and tutored curriculum for a group of underprivileged students at a charity summer school.
- Planned and supervised educational group activities for students.

Skills and Achievements

AWARDS

2013	**Best Intern Award**, LUMUN - Social Responsibility Program	*Lahore, Pakistan*
2012	**43rd Position Nationally**, Kangroo International Mathematics Contest	*Lahore, Pakistan*
2017	**Cultural Understanding and Diversity Award**, Jacobs University Bremen	*Bremen, Germany*

PROGRAMMING

Advance knowledge: C, C++, Java, SML, Scala, JavaScript, LaTeX, HTML, CSS

Working knowledge: C#, Python, R, Matlab, MySQL, Prolog, Processing, Arduino, HTML5, PHP, XML, JSON, Unit Testing

PC KNOWLEDGE   Linux, Apache, REST, AJAX, Embedded Systems, Solidworks, MATLAB, ROS, Django, Microsoft Access, Excel, Word, and PowerPoint.

LANGUAGES

English	second language	**Punjabi**	working knowledge
German	basic knowledge	**Hindi**	working knowledge
Urdu	mother language		

INTERESTS AND HOBBIES   Books, Badminton, Oratory, Event Management, Poetry

Shabbar Raza

Bremen, August 17, 2017.