



# M. RIZWAN MUKATI

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## OBJECTIVE

I want to be a part of an organization, where I can apply my knowledge and skills and help the company to get benefit of my knowledge.

## EDUCATION

Particulars	Year	Institute	Achievements/Results	
<b>M.S Electrical-Electronics Engineering</b>	September, 2017	<i>Istanbul Medipol University – Istanbul, Turkey</i>	CGPA: 3.8/4.00	
<b>B.E Electrical (Electronics)</b>	2014	<i>Bahria University – Karachi, Pakistan</i>	CGPA: 3.53/4.00	
<b>Higher Secondary Certificate (Pre-Engineering)</b>	2010	<i>Meritorious Science College, Karachi, Pakistan (Examination Body: HSC Karachi Board)</i>	Grade = A	Percentage: 74%
<b>Secondary School Certificate (Science)</b>	2008	<i>Meritorious Schools Network Karachi, Pakistan (Examination Body: SSC Karachi Board)</i>	Grade = A+	Percentage: 83%

## PROFESSIONAL EXPERIENCE

<b>PUBLIC SECTOR RESEARCH ORGANIZATION</b>	<b>Assistant Manager</b>	<b>From January 2020 – Present</b>
<b>BAHRIA UNIVERSITY</b>	<b>Lab Engineer / Jr. Lecturer</b>	<b>From January 2018 – January 2020</b>

### RESPONSIBILITY:

- To present lectures and demonstrate labs of various subjects such as Digital Logic Design, Embedded system Design, Power Electronics and Computer Architecture.
- To provide technical training on modern tools to the students.
- To maintain the lab equipment and Inventory of Digital Design Lab.
- To conduct exams, viva and take projects of Students.

<b>RASTEK Technologies</b>	<b>Application Engineer</b>	<b>From October 2017 to January 2018</b>
<b>ISTANBUL MEDIPOL UNIVERSITY</b>	<b>Research Assistant</b>	<b>From October 2015 to September 2017</b>

### RESPONSIBILITY:

- Thesis:** Development of a Wireless Multichannel Neural Data Transmission System with Principal Investigator **Prof. Dr.Tuncer Baykas.**
- Developed an electronic interface to control array of CMUTs (Capacitive Micromachined Ultrasonic Transducers) for biomedical application at Advanced Microsystems Lab, Istanbul Medipol University.
- Developed the designs for Silicon based Micromachined Microelectrode arrays for recording neural signals from the rat brain.

The above works are parts of Research Projects that is approved by TUBITAK (the scientific and technological research council of turkey).

<b>ISTANBUL MEDIPOL UNIVERSITY</b>	<b>Graduate Teaching Assistant</b>	<b>From September 2016 to February 2017 (one Semester)</b>
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### RESPONSIBILITY:

- To demonstrate the lab experiments and to help the students for conducting experiments and give recitation.
- To check the class assignments, lab reports and to prepare the results.

MIST Innovations- Commercial Division of SUPARCO	Electronic Engineer	From September 2014 to August 2015
<p>Research and development on some commercial projects are as follows:</p> <p>1- Thermal Vacuum Chamber. Developed data acquisition system for temperature measurement and to control temperature. Fatek PLC (Programmable Logic Controller) was utilized for the implementation of ladder logic and HMI (Human Machine Interface) was used. Controlling of temperature was performed by using Ziegler Nichols method.</p> <p>2- Developed strip cutting machine for solar panels.</p>		
<b>PUBLICATIONS</b>		
<p><b>From MS Thesis:</b> M. Rizwan Mukati, Samet Kocatürk, Mehmet Kocatürk, Tunçer Baykaş, “<b>A Microcontroller-Based Wireless Multichannel Neural Data Transmission System</b>”, 21st Biomedical Engineering National Meeting, BIYOMUT 2017, Istanbul, Turkey.</p> <p>Mukati MR, Haziq M, Zeshan A, Mumtaz M, Kocaturk S, Riaz R, Guvenis A, Baykas T, Kocaturk M, “<b>A WiFi-based neural data acquisition system for closed-loop neuroprosthetic control</b>,” FENS 2018, Berlin, Germany, 2018.</p> <p><b>Others:</b> Altaf Mukati and Rizwan Mukati, “<b>A Survey on Growing Trends in Automatic Identification and Data Capture Techniques based on Assigned Properties</b>”, pub. International Journal of Computer Science and Information Security (IJCSIS), USA, vol 14, No. 11, pp. 580- 589, Indexed in Master Journal List of Thompson Reuters, Impact Factor 0.519, Nov 2016.</p>		
<b>Achievements / Certificates</b>		
<ul style="list-style-type: none"> <li>• Awarded AWS Machine Learning Scholarship by UDACITY on June, 2021.</li> <li>• Certification of Deep Learning Nanodegree at UDACITY on May, 2020.</li> <li>• Certified as a Microsoft Technology Associate for “<b>Introduction to Programming using Python</b>” on 15<sup>th</sup> March 2021.</li> <li>• Certification on “<b>Python Core Programming</b>” by Saylani Mass IT Training program.</li> <li>• Certificate of participation for attending three days interactive training on “<b>Artificial Intelligence &amp; Data Science</b>” at Bahria University by Prof. Dr. Ashiq Anjum – University of Derby, Uk</li> <li>• Certification for attending workshop of “<b>Python for Data Analysis</b>” at 10pearls.</li> <li>• Certification of “<b>AI for Everyone</b>” course by deeplearning.ai at Coursera.</li> <li>• Certification of “<b>The Data Scientist’s Toolbox</b>” course by Johns Hopkins University at Coursera.</li> <li>• Certification of “<b>Introduction to R</b>” course by DataCamp.</li> <li>• <b>Fully funded Scholarship</b> awarded by Istanbul Medipol University, Turkey for MS studies.</li> <li>• Name in <b>Rector’s Honor’s list</b> at undergraduate level</li> <li>• Scored <b>GPA 3.97</b> (highest in batch in Third semester)</li> <li>• Attended an event on “<b>Campus on Cloud</b>” organized by <b>AlmusNet</b> and <b>Microsoft Pakistan</b> held on 17<sup>th</sup> October 2017 at Movenpick Hotel, Karachi.</li> <li>• Certificate of participation for attending seminar on “<b>ENTREPRENEURSHIP-Lead Towards Your Dreams</b> “</li> <li>• Selected by Plan9 (Pakistan’s largest tech incubator)</li> <li>• Awarded by Amreli Memon Association for achieving A+ Grade in Matriculation</li> <li>• Awarded by Amreli Memon Association for achieving A Grade in Intermediate</li> <li>• On Stage Recognition in college for getting outstanding result in Intermediate Exams.</li> </ul>		

ADDITIONAL SKILLS		
<ul style="list-style-type: none"> <li>• Python</li> <li>• Tkinter</li> <li>• Matplotlib</li> <li>• Raspberry Pi</li> <li>• NumPy</li> <li>• Pandas</li> <li>• MATLAB</li> <li>• NI LabVIEW</li> <li>• C++ programming Language</li> <li>• C# programming Language</li> </ul>	<ul style="list-style-type: none"> <li>• Verilog</li> <li>• Digital Logic Designing</li> <li>• Field-Programmable Gate Arrays (FPGA)</li> <li>• AVR &amp; PIC Microcontrollers</li> <li>• Arduino UNO and Mega</li> <li>• ESP-32 &amp; NodeMCU Wi-Fi Development Board</li> <li>• Proteus</li> <li>• NI Multisim</li> </ul>	<ul style="list-style-type: none"> <li>• NI myDAQ with DIGILENT myDigital Protoboard</li> <li>• VFD-Delta (Variable frequency drive)</li> <li>• Eagle CAD (PCB layout Designing)</li> </ul>

PROJECTS
<ul style="list-style-type: none"> <li>• Developed an interactive GUI using Python Programming Language and Tkinter library to display data of Gyro, Accelerometer, Magnetometer, Pressure, Humidity, Solar panels (for state of charge), Solar cells (for sun tracking) with numeric values, 2D and 3D plots. Raspberry pi was used along with sensors for data acquisition and camera for capturing image. VNC was used for remote access.</li> <li>• Development of a Wireless Multichannel Neural Data Transmission System using Wi-Fi technology (<b>MS Thesis</b>)</li> <li>• Development and designing the electronic interface of commercial Treadmill machine.</li> <li>• Designed a mask of Microelectrode Arrays for neural recording.</li> <li>• Developed an electronic hardware design and provide interface on LabVIEW software to control individual elements of CMUTs (Capacitive Micromachined Ultrasonic Transducer) array of 16*16 and 32*32 related to biomedical application.</li> <li>• Android Based Electrical Load Control using Microcontroller and GSM (Final Year Project).</li> <li>• Controlling and measuring the temperature of Thermal Vacuum Chamber by PLC and showing them on <b>LabVIEW</b> through Modbus communication.</li> <li>• Ultrasonic Range Finder using SR-04.</li> <li>• Digital Clock using Digital Logic.</li> <li>• Solar panel strip cutting machine using Digital Logic.</li> <li>• Dual Power Supply.</li> <li>• Water Level Controller.</li> <li>• Measure voltage of solar panel on <b>LabVIEW</b> using NI USB 6009 DAQ.</li> <li>• Temperature sensor using RTD-PT-100.</li> <li>• Smart Code Lock using AVR microcontroller.</li> <li>• Line following Robot.</li> </ul>

INTERNSHIPS		
<b>PTCL (PAKISTAN TELECOM COMPANY LIMITED)</b> <i>LARGEST TELECOM COMPANY OF PAKISTAN</i>	Departments worked: 1. Wireless, 2. Switching, 3. Transmission	Jul 19 – Aug 29, 2013 (6 Weeks Internship)
<b>SUPARCO (Pakistan Space &amp; Upper Atmosphere Research Commission)</b> PAKISTAN'S LEADING SPACE RESEARCH ORGANIZATION	1- Introduction to satellites, types of satellites, application of satellite, orbits of satellite, components of satellites. 2- During internship, an introduction given about the Remote sensing and Geographical Information System.	JUNE 15 – JULY 31, 2013 (6 Weeks Internship)
<b>RASTEK Technologies</b> RENOWNED IT SOLUTIONS PROVIDERS IN PAKISTAN	1 Learned NI LabVIEW. 2- Hands on experience on Instrumentation Modules. 3- Learned to use AVR AT MEGA 16/32 Microcontrollers	Jul 15 – Aug 15, 2012

PERSONAL INFORMATION
<ul style="list-style-type: none"> <li>• Marital status: Single</li> <li>• Gender: Male</li> <li>• Date of Birth: September 3, 1992</li> <li>• Nationality: Pakistani</li> <li>• Languages: English, Urdu</li> </ul>

References
References will be made available on request