



Abdul Hannan

Electrical (Computer) Engineer

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Address: H # 40/14, Street 2A, Gulraiz-3 High Court Road Rawalpindi, Pakistan

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Areas of Expertise:

- Future Internet Architecture
- Named Data Network (NDN)
- Internet of Things (IoT)
- FPGA Designing
- Embedded System
- Image Processing
- Machine/ Deep Learning
- Smart Systems
- Citrix Professional
- Edge Computing

Technical Skills:

- NS-3 (ndnSIM 2.0, 2.4)
- Verilog, C, C++, Python
- Arduino IDE, Model SIM
- Xilinx ISE Design Suite
- Assembly language
- Matlab GUI Designing
- Virtual Machines and Hypervisor (Nutanix)
- AVR Studio, Proteus Design Suite, Atmel Studio 7
- Azure Administrator Associate
- Things Peak, AWS (Cloud Server)

EDUCATION

2016-2018	MSc in Computer Engineering, Specialization: Digital Design University of Engineering and Technology, Taxila, Pakistan	CGPA: 3.62/4
2011-2015	BS in Electrical (Computer) Engineering Comsats University Islamabad, Pakistan	CGPA: 3.29/4

PROFESSIONAL EXPERIENCE & AND PROJECTS

- ❖ **Axis Technology Solution Group- inc. DinCloud** (Freelancer)
Role: Technical Analyst and cloud support
March 2022- Present
 - ❖ **Responsibilities:**
 - Managed IT services on Hosted Virtual Desktops on the Cutting-edge Cloud
 - Provide Customer support assistance related to Nutanix hypervisor, Microsoft 0365, customer login failure, etc.
 - Understanding of system error logs to troubleshoot the problem of the occurrence and solve it accordingly.
 - ❖ **UMT Sialkot KUST Dept., Sialkot, Pakistan** Feb 2019- Feb2022
Role: Lecturer
- Courses:** Computer Architecture and Assembly Language, Digital Logic Design, Internet of Things, Data Structure and Algorithm
- Responsibilities:**
- Final Year Project Evaluation Committee Member



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- Academic-Industrial Collaboration through ORIC (Dept. Representative)
- Self-Assessment Report (SAR) Member
- Final Year Projects Supervisor
- University Student Society Constitution Consultant

Enhancing Communication skills according to the respective audience. Moreover, course layout design and its applications in the real world are some of the most productive parameters that I learned as a Lecturer in UMT.

❖ UET Taxila (UbiCom), Rawalpindi, Pakistan

Aug 2018- Dec 2018

Role: Project Assistant

Project Title: Human Emotion Recognition from Social Network via Visual Emotion Analysis

Purpose: Recognize Human emotions through their social network profiles

Learn various phases, that are necessary to execute a professional project. Moreover, team lead and time scheduling skills are one those factors, which help me a lot in my currently executed or in my upcoming research projects too.

❖ UET Taxila, Rawalpindi, Pakistan

Aug 2016- Aug 2018

Role: Teaching Assistant

Courses: Digital Logic Design, Digital System Design, Micro-Controllers, Control System

Responsibilities:

- Final Year Projects Supervision/ Research Assistant
- Conduct Labs demo/ Assignments and Papers Evaluation
- Gained Management skills along with learned how to deal with various audience aptitudes

❖ SME BANK, Islamabad, Pakistan

Sep 2015 – Jan 2016

Role: ATM Operation Officer

Responsibilities:

- Monitoring and basic trouble shooting of Bank's Alternate Delivery Channels infrastructure
- Activation and Deactivation of Debit Cards as per SOPs and generate ATM logging docs.
- Help Desk Support to external customers and escalation of their issues to concerned branches and perform daily data backups at particular time intervals.

RESEARCH DOMAIN & PUBLICATIONS

Domain: Internet of Things (IoT), Future Internet Architecture (NDN), Machine Learning (ML),

Hybrid Computing (Edge, Cloud and Fog), Smart System Applications (Cutting-Edge)



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❖ Journals:

- Machine learning-based smart wearable system for cardiac arrest monitoring using hybrid computing
Journal: **Biomedical Signal Processing and Control**; Year: **2023**; Impact Factor: **5.076**
Abdul Hannan, Sehrish Munawar Cheema, Ivan Miguel Pires
Status: **Published**
- Smart Waste Management and Classification Systems Using Cutting Edge Approach
Journal: **Sustainability**; Year: **2022**; Impact Factor: **3.886**
SM Cheema, **A Hannan**, IM Pires
Status: **Published**
- A Portable Smart Fitness Suite for Real-Time Exercise Monitoring and Posture Correction
Journal: **Sensors**; Year: **2021**; Impact Factor: **3.576**
A Hannan, MZ Shafiq, F Hussain, IM Pires
Status: **Published**
- A decentralized hybrid computing consumer authentication framework for a reliable drone delivery as a service
Journal: **PLoS One**; Year: **2021**; Impact Factor: **3.24**
Abdul Hannan, Faisal Hussain, Noman Ali, Muhammad Ehatisham-UI-Haq, Muhammad Usman Ashraf, Ahmed Mohammad Alghamdi, Ahmed Saeed Alfakeeh
Status: **Published**
- Disaster Management System Aided by Named Data Network of Things: Architecture, Design, And Analysis
Journal: **Sensors**; Year: **2018**; Impact Factor: **3.57**
A Hannan, S Arshad, MA Azam, J Loo, SH Ahmed, MF Majeed, SC Shah
Status: **Published**

❖ Conferences:

- Premises based Smart Door Chains System using IoT Cloud
Conference: MobiCom; Year: 2021; Venue: Japan
Abdul Hannan, Faisal Hussain, Sehrish Munawar Cheema, and Ivan Miguel Pires
Status: **Published**
- Detection and Tracking Contagion using IoT-Edge Technologies: Confronting COVID-19 Pandemic
Conference: **IEEE ICECCE 2020**; Year: 2020; Venue: **Turkey**
MU Ashraf, **A Hannan**, SM Cheema, Z Ali, A Alofi
Status: **Published**

FYP PROJECTS SUPERVISION

- Smart** Fitness Belt for user Assistance based on Machine Learning Status: **Completed**
(**NSIRI 2020 Funded**) + (**DICE 2020 Innovation Award winner**)
- Premises-based user Access using IoT cloud in smart door chain Status: **Completed**
Scheme (**NSIRI 2020 Funded**)
- User Assistance Based Drone as a Service based on **hybrid** Status: **Completed**
Computing
- Internet of Household Things (**IoHT**) based recommender Status: **Completed**



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- System using edge and fog computing (**NSIRI 2021 Funded**)
- **Smart** Waste Classification and Monitoring system using Grid Segmentation (**NSIRI 2021 Funded**) and SPCAIC Status: **Completed**
- **Smart** Jacket for Early Heart Attack Analysis using Machine Learning (Compete in **SPCAIC** Project competition) Status: **Completed**

SCHOLARSHIP & AWARDS

- ❖ National Grassroots ICT Research Initiative NSIRI 2019, 2020 and 2021 IGNITE NATIONAL TECHNOLOGY, Fund
- ❖ University of Engineering and Technology, Taxila Fully Funded Scholarship (ASR TD) for Master's Program
- ❖ Got Appreciation Award in DICE 2020, Industrial Project Competition (SAARC) Comsats Lahore 2020, Industrial Artificial Intelligence-based Project Competition (SPCAIC), Pak-Austria 2021

MSc THESIS

Implementation and Evaluation of Named Data Networking (NDN) for Disaster Management System (DMS)

Named Data Networking (NDN) architecture exhibited promising results for IoT as compare to IP-based approaches. Therefore, to tackle disaster management system (DMS), it is needed to explore it through NDN architecture and this is the main motivation behind this work. NDN-DISCA is simulated in ndnSIM considering the disaster scenario of IoT-based smart campus (SC). From results, it is found that NDN-DISCA exhibits minimal delay and improved throughput when compared to the legacy NDN and existing PUSH schemes

SEMINAR & WORKSHOPS

SEMINAR	WORKSHOP
❖ Future Internet Architecture (UMT Sialkot, Iqbal Campus, Pakistan)	❖ Latex Research Tool (Hands on Experience) (UMT Sialkot, Iqbal Campus, Pakistan)

TRAININGS & CERTIFICATES

- Microsoft Azure Administrator Associate Certified, **2024**
- Citrix Certified Professional - Virtualization (**CCP-V**), **2024**
- Python for Everybody **2020 (Coursera)**
University of Michigan
- Faculty Training and Development program (**OLLARC**), UMT **2020**
- Machine Learning for all **2020 (Coursera)**
University of London
- Industrial PLC (S7-300) (hands-on experience on PLC trainer) **2015**
EESINT International Pvt Co.
- SCADA WinCC Training implemented with PLC (S7-300) **2015**



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Will be provided on request