# BELAL QUAMAR

EMBEDDED SOFTWARE ENGI-

## PERSONAL INFO

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## CERTIFICATION

**EMC Associate—Information Storage and Management-2016**

**Pursuing  AWS certified Solutions Architect**

## EDUCATION

**MASc ECE**
Fall 2022– Present
**Research focused on FPGA's**

**Integral University, Lucknow, U.P.**
*Bachelor of Technology (Computers),* 2016

**IELTS**– 7.5
L/R/W/S – 8.5/7.5/6.5/8

**GRE**—301
V/Q/A – 144/157/4.0

**GATE** 2016— qualified

## Current Academics

Pursuing MASc(Research based) at the University of Windsor under Dr. Mohammed Khalid with research focused on Hardware Acceleration using FPGA's on webservers.

## Work Experience

**September 2022– Till date**

Worked as Graduate Assistant for multiple courses assisting the professors and taking labs and grading exams.

**Nov 2016 - August 2022: D.K InfoSolutions Lucknow as a Senior Team Lead working on the following -**

Worked as a Team Lead and single point of contact for the following project

- Learning Management System (LMS) & HRMS development based on PHP, MySQL and Ubuntu Server on digitalocean VM's along with MOODLE framework.
- Application Containerization using docker and Kubernetes along with deployment of a large Kubernetes cluster
- Application migration from asp .net to php framework.
- Php native applications for in house resource management
- E-commerce website using CodeIgniter.
- System admin for remote servers

### Hardware Projects

- Web based Greenhouse controller using raspberry pi
- IoT based load cell to view data over the internet
- Bike monitoring and control system
- Factory Automation and monitoring system
- Infrared Remote based on ESP with AI integration using Alexa
- Attendance management using RFID
- Clocks with an all-time sync via GPS
- Water supply management and monitoring using ultrasonics
- Car Automation using CAN Bus
- PCB development using EAGLE and Fritzing as well as etching using chemicals
- 3d printing and modelling using AutoCAD and Ender 3
- Robotic hand and conveyor belt mechanism prototype for airport baggage management
- Mesh Networking Implementation in ESP devices
- Development of a mesh-based Rx Tx for a UAV.
- Development of a car safety module with on board sensors and cellular integration
- Smart home deployment along with development of in-house smart lights based on ESP (work under progress)
- An automatic hand sanitizer dispenser with WiFi capabilities to alert staff when of its status

### Content Creation

- Developed a 12 session course over IOT for professionals in partnership with Aptech
- A free of cost course over Arduino for school children to be delivered to Gov of A.P.

# BELAL QUAMAR

## SKILLS

**Embedded Tools**

VS Code

PlatformIo

Arduino IDE

RTOS

Linux

ESP8266/32

TI MSP

ATmega

Arduino

RaspBerry Pi

CURA

AutoDesk Fusion 360(PCB)

EasyEDA

**Software Skills**

Intel Quartus Prime

ModelSIM

Vivado

MySQL

GIT

Docker

Kubernetes

R

Tableau

Ubuntu Server

AWS lightsail

AWS lambda

AWS EC2

nginx

REST

PHP

MOODLE

## Social Work

- Worked as volunteer and analyst towards development of a common laboratory set up for schools and ITI's at ITDA K.R Puram Andhra Pradesh along with Prof M.R.K Maringanti and Prof Bapuji Maringanti. In Association with Gov of Andhra Pradesh.
- Analyzed the shortcomings of the current set up and presented ideas to enhance the same and bridge gaps wherever possible.
- Design of a lab for all schools with 900 student/day capacity
- Present innovative ideas among students based on embedded electronics to enhance students interests in science at school level.
- Set up a Learning management system at a tribal girl's school.

### Jun 2015-Nov 2016: Freelancer on the following projects

Electronics Projects based on the following

- Home Automation using ESP devices and mobile app
- In house integration based on Indian set up of devices

Web Applications based on the following

- WordPress applications for user profiles
- E-commerce based on WooCommerce, Prestashop and Magento

## Trainings

- Gave a 5 day workshop on PCB design to 200 faculty members of orchid engg college Maharashtra using autodesk fusion 360 in partnership with AUTODESK
- Mentored 3 students from IIIT Lucknow on developing an IoT cloud including server backend and hardware design on ESP8266
- Attended a 5 day Industrial Training on R and data analytics
- Summer training on "Web and embedded applications using ASP.NET and C#".

## College Projects

- Final Year Project on "Tiger Identification through Image Processing" using MATLAB.
- Worked as Student Associate at Software Development Cell Integral University for the session 2014-16 and developed the college Website using ASP.NET, C# and SQL SERVER.

## Workshops Conferences & Seminars

- Attended and Coordinated the International Conference on Advancement in Computer Engineering and Information Technology
- Attended various workshops on "Programming on P.I.C", "Android App Development", "Arm Controlled Robotics", "Oracle Workforce Development" program, and "Hybrid Android Development with HTML5 Responsive Templates".
- Attended seminars on "Cyber Threats to Digital World", "Green Tech", & "Social Entrepreneurship".

## Academic & Extracurricular Activities

Presented a Seminar on "git" at Integral University Lucknow.
Presented a Technical Paper on "Internet of Things", at FIESTA-2014 Integral University.

## Fields                                        of                                        Interest

Electronics, Computer Programming, Psychology and Coin Collection.