AKBAR **QURAISHI**

Pune, India
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Highly motivated **Electrical Engineer** with experience in R&D, Software & Computer vision applications from **Florida State University, United States**. Additional experience includes programming in C++, Python to create solutions, interfaces and support for main applications.
A quick learner that desires to acquire knowledge on latest technologies and get involved in challenging work.

LinkedIn: linkedin.com/in/akbar-quraishi **GitHub:** github.com/Akbarmq01 **AngelList:** angel.co/amq14

>LANGUAGES AND TECHNOLOGIES

- **Proficient:** Python, ROS,C/ C++, OpenCV, Numpy,Pytorch, Keras, Deep Learning, GStreamer, Nvidia Deepstream SDK, Docker, Kubernetes, Darknet,
- **Exposure:** Deep Learning models(YOLO, fastRCNN, Resnet, U-NET), Neural networks,

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>PROFESSIONAL EXPERIENCE

YantraAI Technologies | Computer Vision Engineer| Pune, IN — 2019 - Present

Building Industrial use case applications based on deep learning applications

- **Video Analytics on Deepstream**
  - Development of Human safety application on Nvidia-Deepstream SDK using YOLOv3 model.
  - Gstreamer pipeline set up for multiple video streams.
  - Worked on a Homography tool using OpenCV to track object movement on a 2D map.
- **Deep Inspector by Yantra**
  - Building a product for industrial inspection through classification & detection Deep Learning models.
  - Tested the performance of modules and hardware to verify Industry appropriate performance.
  - Set up a Jenkins pipeline for automated testing.
- **Robotic cell Manager**
  - Optical Character recognition(OCR) for digital meter reading.
  - Creating SSH API for communication between Edge device and host machine.
  - Setting up an object detection model in Nvidia Xavier for Safety gear detections.
- **Warehouse Security**
  - Building Gstreamer pipelines in Deepstream SDK for deep learning based object detection module.
  - Camera calibrations to reduce distortions.

Florida State University | Teaching Assistant — 2017 - 2018

- **EEL 3705 Digital Logic Design**
  - Assisted Students in understanding the Digital Logic concepts on Flip-flops, Latches, State Machines.
  - Instructed Lab sessions and supervised Projects on ALtera DE2-115 cyclone IV/FPGA, Quatrus Prime.
- **EEL 474 6 Microcontroller Based System Design**
  - Designed Lab session for TI MSP-EXP430F5529LP Microcontroller and assisted students in successful completion of objectives using Energia and Code Composer Studio IDEs.

Florida Department of Transportation | Computer Engineer, Research Assistant — 2015 - 2016

Prototyped design of rectification circuit to provide an interface for lightning surge input to PIC24 processor, resulting in analysis of peak-drop curve

- Collects and researches specific client requirements for projects, identifies requirements, gathers workflow data and basic system and reporting specifications
- Prototyped design of rectification circuit to provide an interface for lightning surge input to PIC24 processor
- using OPC Concept, resulting in analysis of peak-drop curve

- Designed AD converter and programmed MPLAB PIC24 kit for sampling 8/20µs surge utilizing embedded C and automated data sampling with Python to backup data to SSD to avoid device failure.
- Analysed the collected data from the surges and performed data sampling to verify the existing protection standards.
- Performed SPD testing following IEEE C62.41.2 standards published under Traffic Engineering and Operations

>EDUCATION

M.S. Electrical Engineering, *Florida State University,* **US** 2016
B.S. Electrical & Electronics Engineering, *RGTU,* **India** 2013

>ACADEMIC PROJECTS

Modeling the Dynamic Performance Of APR18650 Lithium-ion Cell | Electrical Engineer 2018
Analysis of EIS model by comparing Experimental and simulated results on Li-ion cell

- Performed Charge/ discharge cycles on the DUT at different C rates using Neware battery analyser.
- Used the mathematical model(Simulink) of Li-ion cell to get the simulated charge/discharge profiles and compare it with the experimental results.
- The results showed that the model proposed could be used to study the real time operations of Li-ion batteries under test.
- Performed Mathematical modelling of LiO battery in matlab/C, to understand & verify battery discharge dynamics.

YelpCamp | Software Engineer 2017
Web application that allows uses to explore and share their experience on camping sites . *YelpCamp*

- Designed a UI using vanilla JS , HTML5/CSS,UI Semantic to target users with common outdoor activities.
- Used MEAN stack with RESTful routing concepts to keep the entire application use JavaScript which helped developers to easily understand and follow the code
- Integrated Passport JS and middleware for user authentication that prevented any malicious user to alter the database.

Quasi Static Load Flow Analysis | Electrical Engineer 2015
Load flow and fault analysis on a New England bus system power grid with PV injection.

- Reduced runtime by 20% through implementing Newton Raphson Algorithm for load flow studies in Python.
- Studied impact of transients transients on the PV connected Bus and performed load load analysis for remaining buses in the system.
- Discussed the vulnerability of the grid by PV Installation on Various Bus Locations and showed the Impact With and Without PV on Adjacent Bus.

>AWARDS + CERTIFICATIONS

2nd Place State and Inter College Senior Design Expo, *RGTU* 2014
Trainee, *Bharat Heavy Electricals limited, Crompton & Greaves* 2012

>SKILLS

- Training and deployment of Deep learning models in Pytorch, Keras.
- Automating Software applications using shell, Perl scripts on LINUX OS.
- Gstreamer pipeline buildup for basler camera on object classification module in Deepstream.
- Experience in creating Regression & Artificial Neural Network models, SVMs, Decision Trees, etc.

>Key Courses

- Computer Networks and Security
- WIreless Networks
- Computer System Architecture
- Microprocessors and Microcontrollers

>Languages

English, Hindi,Urdu.