MYRAH NAEEM

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ACADEMIC QUALIFICATIONS

MASTER OF SCIENCE IN COMPUTER ENGINEERING MS (CE) **[2015 – 2018]**

Sejong University, Seoul, South Korea
C.G.P.A: 4.07/4.50 percentile 94.7
Major Modules: Biometrics, Machine learning, Pattern Recognition, Advance HCI (Human and Computer Interface)

I was hired as a Research assistant in Robotics lab (on professor's scholarship). It was a great experience in terms of academic and cultural learning. I worked not only as a researcher but also as a teacher assistant of computer architecture course for undergraduate students. My research was based on face recognition.

BACHELOR OF SCIENCE IN TELECOMMUNICATION ENGINEERING BS (TE) **[2011 – 2015]**

COMSATS Institute of Information Technology, Pakistan
C.G.P.A: 3.00/4.00
Major Modules: Signals and Systems, Digital Signal Processing, Object Oriented Programming, Digital Communication Systems and Network Programming

I Specialized in Signal Processing and opted for Digital and Wireless Communication Systems as electives. I actively participated in team projects to create real world applications.

CAMBRIDGE GCE ADVANCE LEVEL **[2007 – 2009]**

The Renaissance School, Lahore, Pakistan
A Grade - (70%)
Studies focused on engineering fundamental subjects such as Physics, Chemistry and Mathematics.

CAMBRIDGE GCE ORDINARY LEVEL **[2005 – 2007]**

Cathedral High School, Lahore, Pakistan
A Grade - (85%)
Studies focused on engineering fundamental subjects such as Physics, Chemistry and Mathematics.

PUBLICATIONS

Conference Papers

1. **Myrah Naeem,** Usman Cheema, Seungbin Moon: "Preprocessing of 2.5D facial Scans from Stereo Camera" in **KIPS Korea Information Processing Society 2017, Seoul, South Korea**

PROFESSIONAL EXPERIENCE

System Software Developer **[2017– 2019]**
Mediazen, South Korea

1. **Project Title:** Smart Agent
   Client: LG

   Responsibility:
   Development of software according to the system requirement.
   Embedded system development in C++ with Qt Creator on Linux.
   Testing developed Embedded Software on target board.
   Debugging and troubleshooting

2. **Project Title:** MZ_VoiceHandler_Hybrid
   Client: Hyundai Mobis

   Responsibility:
   Development of software according to the system requirement.
   Embedded system development in java programming language on Eclipse.
   Development of GUI interface with java program.
   Testing developed Embedded Software on target board.
   Debugging and troubleshooting.

3. **Project Title:** AVN5Wide_India_svn
   Client: LG

   Responsibility:
   Development of software according to the system requirement.
   Development of GUI interface with java program.
   Testing developed Embedded Software on target board.
   Debugging and troubleshooting

System Software Developer (Manager) **[2020– 2021]**
Softwiz, South Korea

1. **Project Title:** Draw CLI

   Responsibility:
   MFC programming for CLI drawing
   Draw objects, color objects, draw buttons with different functions.
   Delete objects, select objects.
   To learn MFC drawing for creating CRM
   Debugging and troubleshooting.

2. **Project Title:** Server Client Networking

   Responsibility:
   MFC programming for creating Server Client Network.
   Connecting one client with different Servers and vice versa.
   To learn networking for creating CRM
   Debugging and troubleshooting.

   Other Responsibilities:
   Study Forex Trading
   Study of MetaTrader 5 API for interfacing it with CRM.
   Server Client MFC programming

Software Developer (Senior Software Developer) **[2021- 2023]**
QuEST Global Korea, South Korea

1. **Project Title:** Mando ADAS Object Detection

Responsibility:
Camera Projection (perspective projection, affine transformation, translation, and rotation).
Wrapping and unwrapping of images to correct rare images from camera pipeline.
Porting C++ Applications to Linux.
Testing developed Embedded Software on target board (Jacinto7) from Texas Instruments.
Debugging and troubleshooting.
Created applications implementing TIOVX (OpenVX + TI).
Created LUT according to TI method (MATLAB) and implemented it in Camera Application using TIOVX.
Created LUT according to HKMC (Visual Studio) and implemented it in TIOVX for Correcting rear images using cylindrical projection.
Created interface between Python script and QT Simulator app to send data frames to python code for validation and receive the results at simulator.
Created interface between two QT applications through QTCP. (Received and sent data from one application to another).
Changed C++, python, and C codes to TI PSDK format (kernels, graphs, and nodes)
Created Variable Monitoring Chart in QT for data coming from logger.

Graduate Research Assistant **[2015 – 2017]**
Robotics Lab, Sejong University, Seoul, South Korea

As a Graduate Research Assistant in Robotics lab, I worked on 2.5D/3D face recognition and improved recognition rate using different image processing techniques.

Teacher Assistant **[2015 – 2017]**
Robotics Lab, Sejong University, Seoul, South Korea

Worked for 2 years as Teacher Assistant of Computer architecture (Undergraduate Course) at Sejong University. I assisted in checking papers, assignments and delivered lab lectures in the absence of teacher.

RESEARCH PROJECT

2.5D POSE INVARIANT FACE RECOGNITION USING STEREO CAMERA

During Graduate Research Assistantship at Robotics Lab, I proposed a novel algorithm for 2.5D pose invariant face recognition using a stereo camera. 2.5D images were captured from stereo camera and then pre-processed using mesh preprocessing techniques. Feature points were extracted from 2D images using cornerness intensity method which were later mapped on to 2.5D scans to get corresponding 2.5D facial points by texture mapping. For face recognition the input probe images were taken at ±45º 2.5D scans whereas rest of the frontal 2.5D scans were put into gallery. Evaluations were conducted for the proposed algorithm on 2.5D proprietary database to ensure fast and accurate results. The proposed algorithm obtained accuracy of 88.25 % in contrast to all other pose invariant face recognition systems.

PROJECTS (Undergraduate)

OCTOCOPTER BASED TESTBED FOR TESTING AND VALIDATION OF ATTITUDE CONTROL ALGORITHMS

It was my final year Project during bachelors of telecommunication engineering. We focused on designing an Octocopter based test bed having attitude stabilization (3 DOF) which could be further extended to 6 DOF with high fault tolerance capability. IMU (inertial measurement unit) sensor was used for tilt sensing and measurement of angular rates to compute angular position. Fault tolerance techniques were also implemented so that multi rotor would sustain its stability even in case of failure of any rotor. The project consisted of software simulations for performance analysis as well as hardware implementation for the validation of our proposed methodology.

OTHER PROJECTS (Undergraduate)

- 2-D printer: This project consists of model of two-dimensional printer that would generate graph with the help of x-axis and y-axis points embedded in the microchip controller.
- Microstrip Rectangular Patch antenna: we not only designed antenna on HFSS but also made it on NEC-win. This type of antenna is used in mobile communications and satellite communications.

TECHNICAL EXPERTISE

- Efficient in Matlab environment and familiar with DSP, Simulink and wavelet toolboxes. Familiar with network simulators including OPNET modeler and Packet Tracer Proficient with various programing languages including C,C++, Java and C#.
- In-depth understanding of all design applications especially C++ and Java.
- More than 6 years' experience of Object-Oriented Programming.
- Familiar with android development environment (development of android applications in java) and web technologies like CSS and HTML.
- Experience of working with SVN and Git.
- Proficient in usage of MS Windows and UNIX based systems good command on modeling in NI's LabVIEW
- Other notable tools: Proteus, MPLAB, Eclipse, Qt Creator, Creator, Ansoft HFSS, AutoCAD, NEC-Win, OpenCV, OpenVX.
- **Tools Used**: MATLAB, Simulink, Visual Studio, Linux, Arduino Mega 2560, GY-85 9DOF IMU and other hardwareincluding DC motors, propellers, etc.

HONORS AND PARTICIPATIONS

- Attended a 5-day training course by NI (National Instruments) that focused on Communication systems and Control Systems Designing
- Attended 2-day workshop on Mobile Technology by Dr. Hesham Kamel (US)
- Attended 2-day workshop on Voice of Internet Protocol by Mr. M. Farrukh Shahid (Cisco networks, Pakistan)
- Attended a seminar on Wireless Technologies by Mr. M. Farrukh Shahid (Cisco networks, Pakistan)
- Attended ICT workshops on Robotics in South Korea

INTERPERSONAL SKILLS

- Exceptional spoken and written English
- Good Communication and Decision-making
- Report writing skills using Microsoft Office (Word, PowerPoint, Excel)
- Exceptional problem-solving skills excellent pressure handling skills

REFERENCES

Professional and personal reference maybe provided upon intimation.