Ibrahim Nazir Sangi

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EDUCATION

MS-COMPUTER TECHNOLOGY, EASTERN ILLINOIS UNIVERSITY, CHARLESTON, IL (AUG 2016 – MAY 2018) CGPA: 3.94/4.00

- An active member of Research Mentorship Meeting (RMM) held every week
- An active member of robotics design team (also took part in multiple competitions i.e. ATMAE robotics competition)

BS-ELECTRONICS, COMSATS INSTITUTE OF INFORMATION TECHNOLOGY, ISLAMABAD, PAKISTAN (AUG 2008 – JUNE 2012)
CGPA: 3.31/4.00 (81.06%). WON 3RD POSITION (BRONZE MEDAL)

- Designed quadcopter as a final year Project

PROFESSIONAL EXPERIENCE

DESIGN ENGINEER, AND-OR LOGIC PVT LDT, ISLAMABAD, PAKISTAN (JUNE 2012 – AUGUST 2016)

- Developed efficient low and high-level libraries/APIs for micro-controllers including ARM, Microchip, C51 and ATMEL
- Proficient in hardware interfaces such as UART, SPI, GPIO, I2C, SMBus, PMBUS, RS232, RS495, JTAG and USB
- Successfully achieved production of units as junior quality assurance officer
- Designed, developed and implemented high-speed multi-layer PCB design (motherboard for Nvidia TEGRA X1 SOC) (worked perfectly in the first go with zero rework, took complete ownership of the design and critical high-speed differential pairs)
- Designed, power systems and developed firmware for inverters, battery chargers, MPPT charge controllers
- Enhanced PCB designing process by introducing 3D modeling approach (significantly reduced projects timeline by three months)
- Ensured and improved efficiency and quality of work by removing hardware/signal integrity design problems at the design level
- Served as a leading engineer in designing compact, high density, and energy-efficient products
- Rapid prototyping to evaluate project time, concept, resources, and requirements
- Gained hands-on experience with soldering any device (including through hole and surface mount devices)
- An expert in bringing-up, troubleshooting and debugging boards/systems (including FPGA and ARM with JTAG boundary scan)
- BOM generation/optimization, negotiation, and purchasing of components from different vendors worldwide
- Supervised/trained/managed sub-engineers and technicians within the team
- Recruited engineers through technical interviews

VOLUNTEER AND ACADEMIC EXPERIENCE

GRADUATE ASSISTANT, EASTERN ILLINOIS UNIVERSITY, CHARLESTON, IL (JAN 2017 – MAY 2018)

- Remodeled and maintained Automation and Control Laboratory and CENCERE Facility
- Trained and instructed students to complete their laboratory work
- Evaluated smart grid products, based on customer requirements and psychology to ensure greater use of technology
- Developed Student recruitment system to sort and evaluate admissions using PHP, JavaScript, Ajax, SQL, Bootstrap and HTML
- Designed and built a working model of a robot for ATMAE 2017 Robotics Competition at Cincinnati, OH and NRC Marion, OH

SKILLS & ABILITIES

- Embedded Systems Design
- Programming Assembly/C/C++/PHP/HTML/JavaScript/SQL
- Circuit Designing and Analysis
- Power Electronics design
- Digital Signal Processing
- Product Design and Development
- Schematic and PCB Designer
- Mechanical Concepts
- Leadership
- Bringing up boards
- Production and Troubleshooting Skills
- Hardware and Software debugging
- Python
- Surface mount and through-hole devices soldering

TOOLS

- Altium Designer, Proteus
- Oscilloscope, Logic Analyzers, Power Supplies, Soldering Iron, DMM
- Keil µVision, MPLAB, MATLAB, Sublime text, IntelliJ IDEA, Windows, Linux, Eclipse, GitHub, SVN, AVR studio
- Microsoft Office, Visual Studio & Visio
- IAR Embedded workbench
- Cadence PCB editor, Capture

HOBBIES AND INTERESTS

- Reading books, helping people, socializing, playing cricket, badminton, football, and computer games etc.
- Designing and developing interesting circuits to benefit home and society. I also have a blog with open source design and coding examples for young enthusiastic engineers to kickstart their hardware and firmware: http://www.ibrahimlabs.com