ANIRUDH SHARAD

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SUMMARY OF QUALIFICATIONS:

- Lead innovator on 2+ products and technologies leveraging consumer electronics; authored, documented and filed 2 patent applications with Indian Patent and Trademark Office for industry related technical inventions.
- Extensive research background in designing and validating electrical sub-systems.
- Published 3 research papers in International Journals, including two in IEEE.

EXPERIENCE:

Founder, Base Alpha **Mar 2019–Jan 2020**

- Overseeing commerce operations and assembly line remotely, since January.
- Led a team of industry professionals and lawyers through product development and management.
- Developed a state-of-the-art cooling technology. The second technology is in assembly stage.
- Launched a product in domain of consumer electronics. The product is in stages of commercialization.

Intern, Samsung Research Institute-Delhi **Aug 2019–Sep 2019**

Group: Broadcast Certification

- Tested the Samsung Television sets manually using broadcasting signals such as Tata Sky, Dish TV, Sun Direct and Airtel.
- Built an access server in a dedicated team of three, so broadcasting signals can be remotely controlled.

Research Intern, CSIR–National Physical Laboratory (NPL) **Jan 2019–Apr 2019**

Project: Design and Optimisation of Buffer Circuit for Multi – Channel Data Logging System

- Designed two different buffer circuits to remove loading effect of driving circuit and increase periphery by 4 times.
- Performed testing to validate capacity of opto-coupler channel and low power design segment.

Research Intern, CSIR–Central Electronics Engineering Research Institute (CEERI) **Jun 2018–Jul 2018**

Project: IoT – enabled Indoor Air Quality Monitoring

- Created hardware for Air Quality Monitoring using Arduino Mega utilized for finding out the Temperature, Humidity, concentration of Carbon Dioxide & Carbon Monoxide and AQI with an accuracy of 98.81%.
- Developed mathematical algorithm to retrieve output from sensors and displayed parameters using MIT App Inventor.

Research Intern, CSIR–National Physical Laboratory (NPL) **Jan 2018**

Project: Revive 16-channel Data Logger and calibration of temperature and humidity sensors

- Debugged 16-channel data logger being deployed by NPL for gathering data from Cs-atomic clock.
- Conducted troubleshooting and software modulation using system-specific tools such as Atmel Studio.

RESEARCH EXPERIENCE:

- **Patents:**

1. Sharad, A. 2018. Air Cool Design. India Patent Application 311242, Oct 22, 2018, Patent Pending
2. Sharad, A. 2018. Air Cool Technique. India Patent Application 201811043924, filed Nov 21, 2018, Patent Pending

- **Publications:**

1. The Smart City - A Holistic Approach: 11th ICCCNT (pp. 1-7), IIT Kharagpur, IEEE
2. IoMT - based Pill Dispensing System: 10th ICCCNT (pp. 1-5), IIT Kanpur, IEEE
3. IoT - enabled Air Quality Monitoring: International Journal of Electronics Engineering (ISSN:0973-7383)

PROJECTS:

- **10-bit Multiply Accumulator (MAC):** Designed a MAC unit, integrating Kogge-Stone Adder, Master-slave D Flip Flop and an Array Multiplier for arithmetic operations in Digital Circuits, mainly digital signal processing.
- **IoMT- based Pill Dispensing System:** Built a hardware collecting human vitals (like BP, Pulse, Temp, ECG) with an accuracy of 96.42% making data available to authorities for medical consulting through personalised login in mobile app. In case of an emergency/routine medication, pill dispenser dispenses pill with a prior alert.
- **Wireless Gesture Controlled Robot Vehicle:** Devised hardware with AMS-SoC based components, PIC microcontroller(16F887) and Proteus. The movement of vehicle was solely based on wireless hand (gesture) movements.

EDUCATION:

Master of Science in Electrical Engineering **Jan 2020-Dec 2021**
University of Southern California, Los Angeles

Bachelor of Technology in Electronics and Communication Engineering **Aug 2015-Jul 2019**
Guru Gobind Singh Indraprastha University, New Delhi

SKILLS:

- **Management Tool(s):** JIRA, Kanban Methods, Microsoft Office Suite
- **Lab Equipment(s):** VNA, Digital Oscilloscope, DMM, Fluke Temp & Hum Machine, Power Supplies
- **Software(s):** Cadence, ModelSim, LabVIEW, Microsoft 3D, MIT App Inventor, Eagle, Arduino IDE, Proteus Design Suite
- **Language(s):** Embedded C, Verilog, VHDL, Python (OpenCV)