*Curriculum Vitae*

# Archiev Kumar

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*Mathematics is the language with which God has written the universe.*
***— Galileo Galilei***

## SUMMARY OF MY RESEARCH INTERESTS

I am interested in developing new technologies and devices which can make our lives a little simpler. Currently I am understanding the features of Machine Learning and trying to incorporate them with my knowledge of Embedded Systems. I believe that when different fields of study are combined together, it can make a huge impact in the advancement of a generation and that complex problems generally have simple solutions.

## EDUCATION

- **BE, Instrumention and Control Engineering,** Netaji Subhas Institute of Technology, New Delhi (2015-2019)
- **Class XII- 94%,** Cambridge School Indirapuram (2015)
- **Class X- 9.2,** Cambridge School Indirapuram (2013)

## PROFESSIONAL EXPERIENCE

- **Research Intern** at Indian Institute of Science, Bangalore (2018)
  Currently working in NeuRonICS Lab, Department of Electronics Systems Engineering under the guidance of Dr. CS Thakur.
  The central research focus of the NeuRonICS lab is to understand the principles of brain computation and to apply this understanding in electronic systems for building intelligent systems.
- **Summer Intern** at Texas Instruments Centre for Embedded Product Design (2017)
  TI Summer Internship Program on Microcontroller based Embedded System Design. PCB Designing using Eagle CAD and hands on experience in fabrication.
- **Intern** at Bharat Petroleum Corporation Limited, Mumbai (2017)
  Worked in the Department of Instrumentation as an Intern to understand the role of an Instrumentation Engineer in the Industry.
- **Delegate** at Harvard US-India Initiative 2017
  An international conference held once a year by Harvard University, US.

## PROJECTS

- **Heavy Metal Detection Device (2018)**
  Developed a device for *Heavy Metal Detection* using Fluorescent based detection method with an accuracy upto 0.1 ppb.
- **AlexaPi3 – An economical Smart Speaker (2018)**
  Implemented the *Alexa AWS* by Amazon and incorporated it with Raspberry Pi 3 to make a custom Smart Speaker.
- **Wireless MoodLamp (2017)**
  Designed and Fabricated a MoodLamp (based on TI-MSP430) which can be controlled using an Android App via Bluetooth.
- **Handheld/ Wireless Tetris Gaming Console (2018)**
  Revamped the Old Generation Tetris Gaming console with new features and wireless connectivity (based on Arduino). Developed a custom android app which enables the player to control the console using a phone.
- **Sound Localized AlphaBot (NeuroCom 2018 Workshop)**
  Interfaced Sound Localization in an AlphaBot which enables it to detect sound and take a picture or give a live feed and info about the origin of the sound using the onboard capabilites (based on Raspberry Pi)
- **Temperature Sensor Candles (2017)**
  A simple and an economical replacement for the conventional candles used. Senses the temperature changes and behaves accordingly, can be powered using batteries and behaves like a real candle (flickering and can be blowed out)
- **An Introduction to Industrial Instruments (2017)**
  A project giving an overview about the Industrial Instruments used in Commercial Plants and Refineries.

**ACHIEVEMENTS AND EXTRA-CURRICULAR**

- Secured 2nd position in drishTI (a nationwide exam held by TI) and awarded the Certificate of Appreciation by IEEE
- Top 5 at TechKriti, IIT Kanpur (An International TechFest held Annually)
- Contributor at **Hackster.io** (An online community for Electronics Enthusiasts):
  https://www.hackster.io/archievkumar19
- Creator/Blogger at ***ArchTech,*** An online blog for Electronics Updates, DIY/Projects:
  https://archtech1997.wordpress.com
- Currently working on *"Parameter Identification and Optimization of Li-ion Batteries"*
- **Event Head,** Verbum Domini- The Literary Festival of NSIT (2018)
  Organised a National Level literary festival which attracted a participating crowd of over 550 people.
- **Design Head,** Nakshatra- The Math and Astronomy Society of NSIT (2016-2018)
  One of the 5 core members of the society. Conducted more than 20 talks/events throughout the year and headed the graphic designing team.
- **Design Head,** Mirage- The Western Dance Crew of NSIT (2016-2018)
  Designed out of the box logo for Mirage and banners, shirts etc. for the crew in the annual cultural fest of NSIT.
- Member of **Centre for Electronics Design and Technology (CEDT),** NSIT (2017-2018)
  Focused on the field related to embedded systems. Completed projects on Arduino, MSP430, RasPi and participated in events such as Hackathons and workshops.
- Part of a workshop held by IIT Bombay on Internet of Things
- Part of Organizing Committee (Public Relations) at Consilium- The Economics Fest of NSIT

**SKILLS AND HOBBIES**

- C/C++, Python and Matlab
- Eagle CAD, Proteus, TINA-TI
- PCB Designing and Fabrication
- **Graphic Designing-** Adobe Photoshop, Adobe Illustrator, Mandela Art
- Avid Reader (mainly Fiction and Greek/Roman Mythology)
- Running and Weightlifitng
- Blogging