# Curriculum vitae

## PERSONAL INFORMATION


Nishant Mishra

New Delhi (India)

nishant-mishra.com


## EDUCATION AND TRAINING

Aug 2014–May 2018 — **Bachelor's of Technology in Electrical and Electronics Engineering** — EQF level 6

Guru Tegh Bahadur Institute of Technology (affiliated with Guru Gobind Singh Indraprastha University), New Delhi (India)

2013–2014 — **All India Senior School Certificate Examination** — EQF level 4

Delhi Public School, R. K. Puram, New Delhi (India)

Mathematics, Physics, Chemistry, Computer Science, English

2011–2012 — **All India Secondary School Certificate** — EQF level 2

Delhi Public School, R. K. Puram, New Delhi (India)

Mathematics, Science, Social Studies, Computer Science, English, Hindi

Feb 2019 — **Primer on Semiconductor Fundamentals (MOOC) (Audit)**

Purdue University (EdX), West Lafayette (United States)

Jun 2018 — **Nanotechnology for Health (MOOC)**

University of Twente (FutureLearn), Enschede (Netherlands)

Dec 2017 — **Device Characterization with the Keithley 4200-SCS (MOOC) (Audit)**

Keithley Instruments, Inc (Nanohub), Cleveland (United States)

Feb 2017 — **Micro & Nano fabrication (MEMS) (MOOC)**

École Polytechnique Fédérale de Lausanne (EdX), Lausanne (Switzerland)

Nov 2018 — **Circuits and Electronics 1: Basic Circuit Analysis (MOOC)**

Massachusetts Institute of Technology (EdX), Cambridge (United States)

Sep 2016 — **The Arduino Platform & C Programming (MOOC)**

University of California, Irvine (Coursera), Irvine (United States)

## WORK EXPERIENCE

Dec 2017–Present — **Research Intern**

Indian Institute of Technology Delhi, New Delhi (India)

- Characterized a Bioimpedance sensor for bacteria detection
- Fabricating and characterizing a Polysaccharide-based Resistive memory device on a flexible substrate
- Characterizing a BioFET sensor for bacteria detection

1 Jun 2017–1 Aug 2017

### Research Intern

Indian Institute of Technology Delhi, New Delhi (India)

Fabricated and characterized a Protein-based Resistive memory device on a flexible substrate

Aug 2016–Dec 2017

### Member, Electronics Club GTBIT

IEEE GTBIT, New Delhi (India)

- Conducted an academic-industry workshop on Renewable Energy resources
- Conducted a two day hardware hackathon

Aug 2015–Aug 2016

### Member, IEEE

IEEE GTBIT, Delhi (India)

- Taught a Special Interest Group on basics of C
- Conducted a quiz titled “TechQuIEEZ” on IEEE Day 2015
- Conducted mock Group Discussions and Personal Interviews on IEEE Day 2015

## PERSONAL SKILLS

Foreign language(s)

| | UNDERSTANDING | | SPEAKING | | WRITING |
|---|---|---|---|---|---|
| | Listening | Reading | Spoken interaction | Spoken production | |
| English | C2 | C2 | C2 | C2 | C2 |
| | Test of English as a Foreign Language (TOEFL) | | | | |

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user
Common European Framework of Reference for Languages

Job-related skills

- **Physical Vapour Deposition** using Varian 3117 Thermal evaporator
- **Semiconductor characterization** using Keithley 4200 and 4200A parameter analyzers. Experience with Keithley 2636B, Keithley 2400 SMUs
- **Electrochemical Impedance Spectroscopy** using BioLogic SP-150 Potentiostat
- **Mask designing** using ProjeCAD and IntelliCAD
- **Data analysis and plotting** using Origin 2019
- **Infrared Spectrum analysis** using Thermo Scientific Nicolet iN10MX infrared imaging microscope
- **UV-Vis Spectrum analysis** using Eppendorf Biospectrometer
- **Silver Nanoparticle Synthesis** using chemical & biological synthesis
- **Basic Object Oriented Programming** using C++

## ADDITIONAL INFORMATION

Publications

*Vancomycin functionalized WO3 thin film-based impedance sensor for efficient capture and highly selective detection of Gram-positive bacteria*

**Biosensors and Bioelectronics 136:23-30(2019)**

**[Impact factor 8.173]**

https://doi.org/10.1016/j.bios.2019.04.029

*Highly efficient MoS 2 /TiO 2 nanostructure based Field Effect Transistor for Sensitive and Specific/Quantitative Detection of Gram-positive Bacteria*

**In progress**

Conferences

*Reconstituted Fe-Azurin based device for resistive memory switching*

Submitted extended abstract to the **International Workshop on the Physics of Semiconductor Devices, 2017**

Honours and awards

- March 2016- Second Place in Tesla Turbulence -IEEE GTBIT: Quiz on hardware, networking, electronics, boolean algebra, and PC assembly
- 2010-2012- Second Green Badge for academic excellence for two consecutive years - Delhi Public School, R.K. Puram
- 2006-2009- Scholar Badge for academic excellence for three consecutive years - Delhi Public School, R.K. Puram