Devansh Shukla

Integrated Masters of Science in Physics
Department of Physics
Sardar Vallabhbhai National Institute of Technology
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Citizenship: Indian

RESEARCH INTEREST

- Astronomy and Astrophysics
- Cosmology

EDUCATION

2018 - 2023 — **Integrated Masters of Science in Physics** — **CGPA:** 9.71/10 (V Semester)
Department of Physics,
Sardar Vallabhbhai National Institute of Technology
Surat, India (svnit.ac.in)

2016 - 2018 — **Senior Secondary Education** — **Percentage:** 93.0%
Kendriya Vidyalaya No.1 Sagar
Madhya Pradesh, India

2014 - 2016 — **Higher Secondary Education** — **CGPA:** 10/10
Kendriya Vidyalaya No.1 Sagar
Madhya Pradesh, India

FELLOWSHIPS / RESEARCH EXPERIENCE

May - June 2019 — **Visiting Student**
- Digital Signal Processing Lab, Raman Research Institute, Banglore, India
- Advisor: Prof. Avinash Deshpande
- Detecting H1 line with Horn antenna using an SDR.

March - May 2019 — **SWAN Imaging Challenge: Online Based**
- Making a 100 *sq deg* radio image from the data collected during late 2017 by the Sky Watch Array Network, RRI, India.
- www.rri.res.in/SWAN/SWANRRI_whats_new.html

Aug - Sept 2019 — **Radio Frequency Interference Scan using an SDR and SAS-RFI**(1)
- Applied Physics Department, SVNIT, Surat, India.
- Collecting raw voltage data using an SDR from 80 to 300 MHz then processing it to obtain frequencies with significant interference.
- Data & Results – APD RFI Scan

January 2020 — **Hands-On Programme**
- Sky Watch Array Network, Raman Research Institute, India
- Hands-on experience with Murchison Widefield Array(MWA) at Gauribidanur Field Station(GBD), RRI, India.

February 2020 — Poster: "**Indian Sky Watch Array Network : A Strategic Initiative**"
- Mind Bend 2020, SVNIT, Surat, India.

June - Sept 2020 — **SWANtenna20 - Antenna Design Challenge: Online Based**
- Simulating a novel design of Dual orthogonal linear polarization antenna with effective radiative coupling over 50 MHz to 500 MHz.

January 2021

The 2020 University Physics Competition: Online Competition

- Earned Bronze Medal
- For computing trajectory and fuel required for Ion Thruster powered Space-craft from Earth to Saturn.
- Utilized open-sourced repo PoliAstro for orbital calculations and a python script for fuel calculations.
- Report
- 2020_UPC_Results.pdf

SELF-DEVELOPED CODE(S)

- **SAS-RFI**
  - Developed a Python Program for RFI(Radio Frequency Interferance) Scan at Sardar Vallabhbhai National Institute of Technology, Surat, India.
  - The program acquires data using an SDR(Software Defined Radio) and processes it to generate the dynamic spectrum.
  - github.com/devanshshukla99/SAS

SOFTWARE SKILLS

Languages:	Python, C
Platforms:	Linux, Windows
Software & Tools:	LaTeX, WxMaxima, qspectrumanalyzer, 4nec2, GQRX, Mathematica, WIPL-D Pro 16
Python Packages:	AstroPy, PoliAstro, Pandas, NumPy, SciPy, Matplotlib, subprocess, SymPy, ...

RELEVENT COURSES

- Modern Physics
- Electromagnetics
- General Relativity(Self-Taught)
- Classical Mechanics - I
- Special Relativity
- Cosmology(Self-Taught)
- Quantum Mechanics - I
- Tensor Calculus(Self-Taught)

PERSONAL PROFILE

Date of Birth:	9^{th} February, 2001
Pronouns:	He/Him/His
Address:	**Devansh Shukla**, H.No. 269, Triveni Complex, Parkota, Sagar, Madhya Pradesh, India(470 002).
Languages Known:	English, Hindi, Deutsch(noch lernen)

REFERENCE(S)

Prof. Kamlesh Pathak

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Department of Physics,
Sardar Vallabhbhai National Institute of Technology, Surat, India
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