



Akash Muni

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ABOUT ME

I am a balanced, diligent, and highly capable technical professional with a strong analytical mindset and a background in physics. With hands-on experience in advanced laboratory environments and a Master's degree, I have honed my problem-solving, troubleshooting, and technical skills. I am eager to apply my expertise in a technical support role, where I can leverage my attention to detail, adaptability, and passion for helping others to resolve complex issues and ensure seamless user experiences. My proactive approach, combined with my ability to analyze and optimize systems, makes me well-suited to deliver efficient and reliable support while contributing to the success of your team.

WORK EXPERIENCE

Project Scientific Assistant - B

HBCSE (Homi Bhabha Centre for Science Education) [04/2022 – Current]

City: Mumbai | **Country:** India | **Website:** <https://www.hbcse.tifr.res.in/> | **Business or sector:** Professional, scientific and technical activities

- Working as a Scientific Assistant in the NIUS Physics Laboratory.
- Expertise in handling FDM and SLA 3D printers, both at the hardware and software levels.
- Providing hands-on training to students, staff, and teachers on effectively using 3D printers and their software to enhance learning and innovation.
- Slicing and 3D printing designs using FOS Software and 3D printers. Hands-on experience in using Onshape (browser-based CAD modelling Software).
- CAD modelling of experiments and custom parts needed for undergraduate-level experiments.
- 3D-modelled Optical Black Boxes. (Optical black boxes are UG-level optical experiments where students are expected to study a given box that has various optical components and find their parameters such as focal length, grating spacing etc.)
- 3D-modelled detector mount used in the Polarization experiment.
- Handling all operations related to the National Initiative for Undergraduate Sciences (NIUS) Physics.
- Testing and setting up various types of undergraduate-level experiments.
- Worked with project students selected for the NIUS project (teaching and explaining various experiments and concepts related to physics). Also worked with Project students on various aspects of education research-based topics.
- Extensively worked on a project which involved the interference of light due to Ophthalmic lenses. Studied various types of lenses and their pattern formed due to interference.
- Training and guiding selected students representing India for the IPHO (International Physics Olympiad) in the experimental aspect.
- Designed and developed electronic instruments and parts related to various experiments.
- Developed instruction manuals and handouts for experiments, setups and instruments.
- Photographing of various instruments with a reference scale so that these can be reproduced easily by institutes, colleges and industries.
- Troubleshooting, testing, and assembling various types of equipment and electronic instruments.
- Working with Professors on various programs like Vigyan Vidushi (VV), and College Visit at HBCSE happening throughout the year.
- Ordering and managing all cash purchases of relevant lab instruments.
- Maintaining the NIUS physics lab and completing various day-to-day administrative tasks.

- Participating in various outreach programs organized by the Tata Institute of Fundamental Research (TIFR), Colaba, Mumbai.
- Assisting other professors in setting up and explaining various physics experiments at the National Science Day event hosted by the HBCSE.

Course Developer Intern

Myquestionbox Education Opc Pvt Ltd [01/2020 – 05/2020]

City: Mumbai | Country: India

- Developed new questions and content for various competitive exam practice tests, such as NEET and JEE.
- Typed questions and equations using suitable LaTeX and HTML editors.
- Checked each question to ensure proper display on the website.
- Developed content for subjects like Biology and Chemistry as well.
- Hand-drew diagrams and images related to biology and chemistry

Visting Student Research Program(VSRP)

Tata Institute Of Fundamental Research (TIFR) [05/2018 – 07/2018]

City: Mumbai | Country: India | Website: <https://main.tifr.res.in/> | Business or sector: Professional, scientific and technical activities

- Worked as a Research Student under the Guidance of Prof Rudrajyoti Palit at the DNAP (Department of Nuclear and Atomic Physics), TIFR, Mumbai.
- Worked on fabricating Thin Target Foils Using different methods (Sputtering, Resistive Heating. etc).
- Specialized in making foils using the Pressure Rolling Method for Target Preparation.
- Studied and worked on Measuring target foil thickness using an Alpha source.
- Studied the theoretical aspects of Lifetime Measurements of nuclear states using the Recoil Distance method (RDM).
- Worked on calibrating a Piezoelectric Actuator using capacitance induced between two thin films mounted on the actuator.

EDUCATION AND TRAINING

Master of Science (M.Sc)

Dr. Homi Bhabha State University [2020 – 2022]

City: Mumbai | Country: India | Website: <https://hbsu.ac.in/> | Field(s) of study: Solid State Physics | Final grade: 9.61 / 10 | Level in EQF: EQF level 7 | Thesis: Synthesis Of Thin Target Films for Nuclear Research and their Thickness Measurement using Alpha Source

- Worked in the target preparation lab on optimizing the parameters required for synthesizing a Self-supporting enriched Chromium thin film.
- Prepared copper thin films used as a substrate for deposition of chromium.
- Learned and performed how to dissolve copper in Nitric acid solution.
- Prepared Holmium thin films on a backing of gold thin films
- Measured the thickness of prepared chromium thin film using alpha particles.
- Explored and helped scientific officer in the preparation of boron thin films using the electron gun setup which uses the electron sputtering method.
- Learned how material pellets are prepared for the electron gun setup.
- Prepared a poster of my entire work on chromium thin films.

Bachelor of Science (B.Sc)

University of Mumbai [2016 – 2019]

City: Mumbai | Country: India | Final grade: 8.44 / 10 | Level in EQF: EQF level 6

Higher Scondary Certificate (H.S.C)

The Maharashtra State Board of Secondary and Higher Secondary Education

City: Mumbai | Country: India

LANGUAGE SKILLS

Mother tongue(s): Odia

Other language(s):

English

LISTENING C2 **READING** C2 **WRITING** C2

SPOKEN PRODUCTION C2 **SPOKEN INTERACTION** C2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

DIGITAL SKILLS

OnShape - CAD modelling / Microsoft Office / Orca / LaTeX (very good) / Python Language - Basic knowledge / Linux (Terminal Commands, Bash/Shell) / Hardware Debugging / Photo and photo editing skills / Video editing and video making / HTML, Mac OS, MS Office, Troubleshooting, Ticketing Systems (Service Now), Windows.