

S M Rafee Adnan

Curriculum Vitae

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Education

- November, 2021 – Present **Master of Science in Physics**, *Shahjalal University of Science and Technology*, Sylhet.
- April, 2014 – September, 2021 **Bachelor of Science in Physics**, *Shahjalal University of Science and Technology*, Sylhet.

Skills

- Languages Bangla (native), English
- Programming Languages Python, C, C++, SQL, ADQL, Wolfram Language
- Softwares \LaTeX , TOPCAT, Glue, Microsoft Excel, Blender
- Operating Systems Linux, Windows

Attended Schools

- July, 2022 **2022 Sagan Exoplanet Summer Hybrid Workshop**
Hosted by The NASA Exoplanet Science Institute, California Institute of Technology, Pasadena, CA
- Selected as one of the 18 hands-on session helpers who helped facilitate the instructions.
 - This workshop was focused on the topic of exoplanet science in the Gaia era.
- February, 2022 **Dawn Winter School 2022**
Hosted by The Cosmic DAWN Center - Niels Bohr Institute, University of Copenhagen, Denmark
- The school consisted in frontal lectures and hands-on sessions on relevant topics in galaxy formation and evolution, plus a segment dedicated to soft skills meant to help students and early career scientists.
- August, 2021 **International Virtual Course on Astrostatistics and Machine Learning**
Organized by Astronomy Study Program, Institut Teknologi Bandung (ITB) and National Astronomical Research Institute of Thailand (NARIT)
- This course provided a comprehensive knowledge about astrostatistics and machine learning, and their application on various astronomical research topics. Including hands-on which were done individually and in group. (Grade: 93 out of 100)
- May, 2021 – June, 2021 **Introductory Summer School in Astronomy and Astrophysics (ISSAA)**
Organized by Inter-University Centre for Astronomy and Astrophysics (IUCAA), India.
- The school consisted of lectures covering the fundamentals of Astronomy & Astrophysics as well as recent developments in the field. The lecturers for the school were drawn from the leading Astronomy & Astrophysics centres in India.
- November, 2020 – February, 2021 **Kathmandu Astrophysics School (KAS20)**
Organized by University of Melbourne, Australia.
- KAS20 is an online program covering key concepts and techniques used in observational astrophysics, introductory astrophysical coding in Python, and professional development and teaching skills.

September, 2020 **Summer School on Galaxies and Cosmology (SSGC)**
*Organized by **Astronomy Research Division, Institut Teknologi Bandung (ITB)**, Indonesia.*

- The discussed topics covered recent issues on dark matter: current experiments and observations, and alternative ideas to dark matter theory.

September, 2018 **Introduction to Astronomical Databases and their uses**
*Organized by Maqsudul Alam Science Laboratory in association with **The Haus der Astronomie (HdA)** and **Max Planck Institute for Astronomy**, Heidelberg, Germany.*

- Gaia data release 2 and the way of using astronomical software Topcat were the main focus.

Awards & Grants


ICT Innovation Fund 2019-20 **Funded Project: Immersia**, was granted a fund of 15,00,000 BDT by ICT Division of Bangladesh Government to promote innovative ideas and its implementation.

NASA Space Apps Challenge 2018 **Global Winner (Category: Best Use of Data)**. Out of 1395 teams and 18,000 participants from around the world.


National Science Festival 2011 **Secured 3rd Place in Project Display (Physical)** for displaying a project regarding linear magnetic accelerator.

Junior Govt. Scholarship 2008 Obtained Scholarship for securing merit position in the Government Board Examination.

Work Experience

December, 2019 – Present **Co-Founder and Chief Creative Officer**
OLIK LTD. *An Animation and Games Studio* 

- Developed *Lunar VR*, an award winning project in NASA Space Apps Challenge 2018.
- Developing *Immersia*, a new learning system equipped with state of the art technologies.

July, 2018 – June, 2019 **General Secretary**
Copernicus Astronomical Memorial of SUST (CAM-SUST) 

- Only official astronomical organization of Shahjalal University of Science and Technology.
- I was a general member, field education director, organizing secretary of this organization in 2014, 2015 and 2016 respectively.



Extra Curricular Activities

January, 2006– December, 2010 **Boy Scout**
Dhaka Residential Model College Scout Team


- Attended 11th Annual Training Camp 2008, held in *National Scout Training Center, Gazipur*.
- As a scout I was involved in various voluntary social services during this period.

Projects

IVC on Astrostatistics and ML

- Using HDBSCAN to separate the members of m67 from the background stars and analyzing the characteristics of the star cluster. 
- Using Data Compensated Discrete Fourier Transform(DCDFT) to determine the period of a variable star. 

Astrophysics Lab SUST Evolution of massive stars at low metallicity and comparison of IMF for young and old clusters.(Ongoing)

LunarVR This project is a VR experience that enables the public to explore the Moon. 
We have created three experiences-

- Seeing solar eclipse from the moon.
- Exploring interactive Apollo 11 landing site.
- Orbiting the moon with the LRO satellite.

Immersia We are trying to re-innovate the way of learning using the latest technology. Using our service
(Ongoing) students can immerse themselves in the virtual lab and learn with audio-visual interaction. This makes learning more effective, efficient and enjoyable. Along with traditional learning, our service will provide cost-effective virtual experience.

Academic References

- **Dr Syed Badiuzzaman Faruque** (awsbf62@yahoo.com)
- **Dr Nazia Chawdhury** (nc-phy@sust.edu)
- **Dr Tanvir Ahmed** (tahmed-phy@sust.edu)