DARSHAK PATEL

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EDUCATION

BS	University of Waterloo, Honours Physics & Astronomy	05/2023
HS	Victoria Park Collegiate Institute TDSB OSSD Diploma	06/2018
HS	Victoria Park Collegiate Institute International Baccalaureate Diploma	06/2018

WORK EXPERIENCE

Junior Astronomer, Herzberg Institute Astronomy and Astrophysics   05/2022 – 08/2022
- Supervisor: Dr. Toby Brown
- Conducted research on the competing influence of morphological and environment-driven quenching in VERTICO (Virgo Environment Traced in CO) survey galaxies using machine learning techniques
- Utilized shared Jupyter and python computing environments for scientific analysis and plotting
- Presented my research to the VERTICO collaboration and in research centre meetings

Undergraduate Research Associate (on DEAP-3600), SNOLAB   09/2021 – 12/2021
- Supervisor: Dr. Chris Jillings
- Performed calibrations and quantified the electronic noise and charge resolution of the photomultiplier tubes (PMTs)
- Programmed a Python script tasked to automate the data analysis for the experiment
- Assisted with hardware upgrades for the DEAP-3600 detector (e.g., rebuilt roughing pumps, leak checked large dewars, rebuilt a citric acid wash)
- Trained and experienced in the use of cryogenics (e.g., Liquid Nitrogen and Liquid Argon)

Space Radiation Project Assistant, Canadian Space Agency   09/2020 – 04/2021
- Supervisor: Mrs. Leena Tomi
- Assisted with the analysis and storage of data from the Radi-N2 study onboard the International Space Station (ISS)
- Assisted with an ongoing radiation bio-monitoring program and associated research in collaboration with Health Canada
- Conducted systematic literature searches and literature review

Science and Math Online Expert, 360 Education Labs Inc   01/2020 – 04/2020
- Conducted tutoring sessions for students ranging from kindergarten to Grade 12
- Compiled detailed and organized weekly reports
- Tracked the movement and usage of major company assets
- Provided technical support for both tutors and students

HONORS AND AWARDS

University of Waterloo Athletic Financial Award   2022-2023
Awarded to student-athletes at the University of Waterloo in recognition of their
academic and athletic achievements.

Dean's Academic Honor List – 5th Year   2022-2023
Awarded to full-time study students who achieve and maintain an average of 80%
(Or higher) for the duration of the academic year.

Dean's Academic Honor List – 4th Year   2021-2022
Awarded to full-time study students who achieve and maintain an average of 80%
(Or higher) for the duration of the academic year.

Dean's Academic Honor List – 3rd Year   2020-2021
Awarded to full-time study students who achieve and maintain an average of 80%
(Or higher) for the duration of the academic year.

Dean's Academic Honor List – 2nd Year   2019-2020
Awarded to full-time study students who achieve and maintain an average of 80%
(Or higher) for the duration of the academic year.

Dean's Academic Honor List – 1st Year   2018-2019
Awarded to full-time study students who achieve and maintain an average of 80%
(Or higher) for the duration of the academic year.

President's Scholarship   2018-2019
Awarded to incoming undergraduate students who have an admission average
between the range of 90% to 94.9%

PRESENTATIONS

Student Presentation, "Examining Morphological Quenching in the VERTICO Survey
Galaxies using Machine Learning", NRC HAA Science Talk, August 18th , 2022.

Student Presentation, "Examining Morphological Quenching in the VERTICO Survey
Galaxies using Machine Learning", NRC Summer Student Showcase, August 17th , 2022.

Student Presentation, "PMT Charge Resolution and Electronic Noise for DEAP-3600", SNOLAB Fall 2021 Student Talk Competition, December 15th, 2021.

COMPUTER SKILLS

Programming: Python, C++, BASH, Git, HTML, CSS, R

Applications: Microsoft Applications (Word, PowerPoint, Excel, Publisher), Jupyter, ROOT, Adobe Photoshop, Adobe Lightroom,

Operating System: Windows, MacIntosh, Linux/Unix

PROFESSIONAL TRAINING

SNOLAB, Undergraduate Research Associate   09/2021 - 12/2021
- SNOLAB Site Specific In-Person Underground Training
- SNOLAB Site Specific Online Training
- Vale General Tier-1 Training
- Vale Tier-2 (Mines Operation) Training
- Vale General Tier-3 (Creighton Site Specific) Training

COMMUNITY SERVICE

BAPS
Regional/National Youths Activity Coordinator, Toronto   09/2015 - Present
- Organize weekly classes for youth ages 16 to 23 at the local temple (i.e., a center) to keep youth active in the community
- Led a team of 10 in producing and writing content for a national youth convention held in 2019
- Analyze weekly statistics of the center using an online database to infer future trends for the center and areas of improvements
- 500+ hours of service

Skate Canada
CanSkate Program Assistant, Toronto   09/2014 - 04/2018
- Taught lessons to skaters independent of coaches; developed effective teaching skills and an understanding for safety
- Communicated with parents through face-to-fact interactions regarding their skater's progress and program updates; refined my interpersonal communication skills
- 150+ hours of service

LANGUAGES

English: Fluent Speaker, Reading and Writing

French: Novice Speaker, Reading and Writing

Gujrati: Novice Speaker, Intermediate Reading, and Writing