Utkarsh Mali

60 St. George Street – Toronto, ON, M5S 1A7, Canada
647-234-0742 utkarsh.mali@mail.utoronto.ca
utkarshmali.github.io

Education

University of Toronto, Victoria College
H.*B.Sc. in Physics, Mathematics and Computer Science* *2018-2022*

Research Experience

UNDERGRADUATE

Kilonovae Light Curves
University of Toronto *2021*
Supervisor: Dr. Keir K. Rogers
Model fitting visible counterparts to gravitational wave events using Gaussian processes, principal components analysis and Markov-chain Monte-Carlo.

Image classification of Martian topographic features
University of Toronto *2020*
Supervisor: Prof. Christopher Lee
Created an efficient scalable machine learning model using supervised machine learning methods, mask detection.

Circuit Quantum Electrodynamics
National University of Singapore *2020*
Supervisor: Prof. Yvonne Gao
Exploring a software automating the discovery of superconducting qubits.

Organic Spectroscopy
National University of Singapore *2019*
Supervisor: Dr. Krzysztof Banas
Rapid authentication of organic materials using Fourier Transform Infrared (FT-IR) spectroscopy using multivariate analysis.

Conference Posters

Department of Astronomy Summer Undergraduate Fair **University of Toronto**
Machine learning the visible counterparts to gravitational wave events: kilonovae *2021*

Department of Physics Undergraduate Research Fair **University of Toronto**
Analysis of topographic features on Mars using machine learning *2020*

Conference Presentations and Invited Talks

Department of Astronomy Summer Undergraduate Presentations **University of Toronto**
Kilonovae: We don't know what we don't know *2021*

Canadian Undergraduate Physics Conference 2020 **University of Western Ontario**
Analysing SCILLA: the discovery of superconducting qubits *2020*

Center for Quantum Technologies **National University of Singapore**
Software developments on automated transmon discovery *2020*

Arts and Science Undergraduate Research Fair **University of Toronto**
Rapid authentication of organic materials using FTIR spectroscopy *2019*

Singapore Synchrotron Light Source **National University of Singapore**
Adulteration of Edible Bird's Nests *2019*

Publications

1. Dylan Vogel, Avinash Naraiah Mukkala, Kimberly Ren, et.al: "*HERON: Demonstrating a Novel Biological Platform for Small Satellite Missions*" **Contributing Author**

Awards and Grants

Summer Undergraduate Research Grant
University of Toronto, $9,393 *2021*

Summer Undergraduate Poster Award
University of Toronto, $50 *2021*

Dean's Honors List

University of Toronto *2021*

Natalia Krasnopolskaia Memorial Research Fellowship
University of Toronto, $3,159 *2020*

Undergraduate Research Grant
National University of Singapore, $1,883 *2020*

Undergraduate Research Grant
National University of Singapore, $3,766 *2019*

National Youth Achievement Award, Gold
Duke of Edinburgh, Singapore *2016*

National Youth Achievement Award, Silver
Duke of Edinburgh, Singapore *2014*

Professional Positions

Thermal Engineer
University of Toronto Aerospace Team *2018-2020*

- Designing and testing battery insulation
- Consultant for the payload bay insulation.
- Created and tested hardware components for ground station
- Surface mount, through-hole and solder paste stencilling of circuit boards

Professional Development

- International Mentor
  - Identify Assist Refer
  - Peer Support Relationship
  - 1 on 1 Communication
  - Facilitating Groups Online

    - Creating an Inclusive Environment
- Army
    - Driving Course
    - Leadership Basic Training
- Events director (Academic Commission)

Outreach

- Science Center Volunteering

Equity, Diversity, and Inclusion