

# ISHAN F. GHOSH-COUTINHO

## CURRICULUM VITAE\*

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<b>Education</b>	B.S. IN ASTRONOMY, University of Washington (UW)	2024
	B.F.A. Minor in Drama: Design for Performance, (UW)	2024
<b>Research Experience</b>	UNDERGRADUATE RESEARCHER (UW Massive Star Group & DiRAC Institute)	2020 – 2024
	Supervisor: Prof. James R.A. Davenport, Prof. Emily M. Levesque, Dr. Trevor Dorn-Wallenstein (Published: Ghosh-Coutinho et al. <a href="#">2023</a> , 2024 (expected)) (Conference Proceedings: Ghosh-Coutinho et al. <a href="#">2023</a> , <a href="#">2024</a> )	
	30" TELESCOPE OPERATOR (Manashtash Ridge Observatory) Supervisor: Prof. Oliver Fraser (University of Washington)	2023 – Present
<b>Publications &amp; Conference Proceedings</b>	PUBLICATION: <a href="#">PHOTOMETRIC CLASSIFICATION OF EVOLVED MASSIVE STARS: SPECTROSCOPIC VERIFICATION AND VALIDATION</a> <b>Ishan Ghosh-Coutinho</b> , Trevor Dorn-Wallenstein, Emily Levesque, & James Davenport. Research Notes of the American Astronomical Society (November 2023)	
	IPOSTER: <a href="#">PHOTOMETRIC CLASSIFICATION OF EVOLVED MASSIVE STARS: HIGH-RESOLUTION SPECTROSCOPIC VALIDATION</a> <b>Ishan Ghosh-Coutinho</b> , Trevor Dorn-Wallenstein, Emily Levesque, & James Davenport. Bulletin of the American Astronomical Society, (January 2023)	
	IPOSTER: <a href="#">CENSUS OF VARIABILITY OF LUMINOUS BLUE STARS IN GAIA AND ZTF</a> <b>Ishan Ghosh-Coutinho</b> , James Davenport, Emily Levesque, & Trevor Dorn-Wallenstein. Bulletin of the American Astronomical Society, ( January 2024)	
<b>Honors &amp; Awards</b>	WOODIE FLOWERS AWARD NOMINEE (FIRST)	2024
	PRESIDENT PRO TEMPORE OF THE ASUW STUDENT SENATE (HONORARY TITLE) (UW)	2024
	DEANS LIST (UW)	2023
	INVITED PANELIST, PANEL ON UNDERGRADUATE RESEARCH IN PHYS. AND ASTRO. (UW)	2023
	CHAMBLISS AWARD RUNNER UP, AMERICAN ASTRONOMICAL SOCIETY 241, (AAS)	2023
	SENATOR PARLIAMENTARIAN OF THE ASUW SENATE (HONORARY TITLE) (UW)	2023
	2022 DiRAC SUMMER RESEARCH PRIZE (DiRAC)	2022
<b>Successful Observing Proposals</b>	Manastash Ridge Observatory 30", Telescopes (14 full nights) - Certified Observer Mutiple projects including multiband variable star photometry with Evora. P-I: <b>I. Ghosh-Coutinho</b>	2023 – Present
	APO 0.5-m ARCSAT (4 Half Nights) - Trained Observer Observing variable massive stars identified from ZTF for the Astronomy 480 course. P-I: S. Tuttle	2023

\*A live copy of my CV is available at the flowing link: <https://ifgc.github.io/images/CV.pdf>

APO 3.5-m (3 half nights) - Trained Observer 2021  
 Co-observing massive stars with the echelle spectrograph.  
 P-I: T. Dorn-Wallenstein

**Employment** COMMITTEE CHAIR October 2023 - Present  
 Associated Students of the University of Washington (ASUW),  
 Senate Committee for Resolution Follow-Up, Seattle, WA

**Employment** GRADER Jan 2024 - Present  
 University of Washington, Department of Astronomy, Seattle, WA

**Speaking & Conference Experience**

Invited Talk, Theodore Jacobson Observatory	2024
Contributed Talk, Mary Gates Undergraduate Research Symposium	2024
Contributed Talk, Astronomy on Tap	2024
Invited Talk, Theodore Jacobson Observatory	2024
Contributed iPoster, 243rd Meeting of the American Astronomical Society, iPoster	2024
Invited Talk, Battle Point Astronomical Association	2023
Invited Panelist, Panel on Undergraduate Research in Physics and Astronomy	2023
Attendee, Dark Universe Science Center & Institute for Nuclear Theory, Cosmic Intersections	2023
Invited Speaker, Pacific Science Center 2023 Eclipse & Meet a Scientist Day	2023
Contributed Science Talk, Astro Fest	2023
Contributed Structural Talk, Astro Fest	2023
Contributed Talk, Mary Gates Undergraduate Research Symposium	2023
Contributed iPoster, 241st Meeting of the American Astronomical Society	2023
Contributed Talk, Mary Gates Undergraduate Research Symposium	2022
Contributed Talk, Mary Gates Undergraduate Research Symposium	2021

**Technical Skills**

**Programming Languages:** Python, SQL/ADQL, Java,  
**Other:** Unix Shell, IRAF, SAO DS9, L<sup>A</sup>T<sub>E</sub>X, PhotUtils, PyMC, Emcee, Adobe Suite, Visual Basic for Applications (VBA)  
**Observing Skills:** Proposing, planning, and carrying out optical spectroscopic and photometric observations, Survey & time-domain data retrieval and analysis; machine learning methods (regression & classification);  
**Languages:** English, Hindi, Bengali (Spoken), German, French

## Service, Outreach, & Experience

UW SEXUAL-ORIENTATION AND GENDER MINORITIES IN ASTRONOMY, FOUNDER & CO-CHAIR (UW)	2023 – Present
PLANETARIUM PRESENTER, 100 SHOWS AND EVENTS AND COUNTING (UW)	2021 – Present
UW ASTRO UNDERGRADUATE VOLUNTEER COORDINATOR & UNDERGRADUATE OUTREACH SITE LEAD FOR PACIFIC SCIENCE CENTER ECLIPSE EVENT	2023
SCHOOL OF DRAMA, LEAD COSTUME DESIGNER - <i>Airness</i> (UW)	2024
SCHOOL OF DRAMA, ASSISTANT COSTUME DESIGNER - <i>The Moors</i> & MISC. (UW)	2023
ASUW SENATOR, CHAIR OF COMMITTEE FOR RESOLUTION FOLLOW UP	2023 – 2024
ASUW SENATOR, COMMITTEE FOR SENATE STEERING	2023 – 2024
ASUW SENATE'S LIASON TO UW OFFICE OF GOVERNMENT RELATIONS, COMMITTEE ON LEGISLATIVE STEERING	2023 – 2024
ASUW SENATOR, MEMBER OF COMMITTEE FOR RESOLUTION FOLLOW UP	2022 – Present
ASUW PRESIDENT'S LIAISON TO UW TRI-CAMPUS COMMITTEE ON PREPAREDNESS OVERSIGHT	2022 – 2024
FIRST WASHINGTON, PNW DISTRICT CONTROL SYSTEMS ADVISOR	2022 – Present
FIRST WASHINGTON, PNW DISTRICT ROBOT INSPECTOR	2021 – Present

ASUW SENATE'S LIAISON TO THE HUSKY UNION BUILDING, BOARD OF REPS.	2020 – 2021
ASUW SENATOR, MEMBER OF ON CAMPUS COMMITTEE	2020 – 2021
VOLUNTEER GAME MASTER, PEN AND PAPER GAMING ASSOCIATION	2020 – Present
FIRST WASHINGTON, MENTOR TO FRC TEAM 4180 IRON RIDERS	2024 – Present
FIRST WASHINGTON, CONSULTING MENTOR TO FRC TEAM 4180 IRON RIDERS	2020 – 2024
FIRST WASHINGTON, MENTOR TO FRC TEAM 8248 CHAINLYNX	2019 – Present

## Teaching & Mentoring

MENTOR FOR LINCOLN HIGHSCHOOL CTE PROGRAMS & FIRST ROBOTICS COMPETITION TEAM 8248, CHAINLYNX 2019 – Present

- Mentored >60 students in skills such as effective design strategies, control systems design and programming. Taught students effective scientific and engineering problem-solving, programming, and troubleshooting. Guided students through the design and design review processes. Guided students through team management, leadership soft skills, curriculum development and peer mentoring. Provided students with networking opportunities.

ANNUAL DATA SCIENCE FOR HIGHSCHOOLERS WORKSHOP 2022–Present

- Taught students basic use of Jupyter Notebooks, python, github, APIs, to pull data and analysis through various packages such as pandas, scipy, matplotlib, etc. Introduced students to basic data science concepts and bayesian statistics.

JOURNAL CLUB FOR HIGH SCHOOLERS 2022,2023

- Created a program for high school students that used a combination of **astrobites** and presentations to simplify astronomy and astrophysics papers whose titles students found interesting and selected. There have been 14 such Journal Clubs.

HIGH SCHOOL TUTOR 2020–Present

- Helped >20 high school students work through assignments and concepts related to science, engineering, history, social science, and math.

PEER TUTOR & MENTOR 2022-2023

- Helped 7 students work through assignments and concepts in lower-division physics, astronomy and math coursework and gave advice on how to approach upper-division coursework and research and college life as a whole.