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TEACHING PHILOSOPHY

I am passionate about education and pedagogy, with a focus on practical skills such as programming and data analysis that are not often taught as part of a traditional science curriculum. My teaching philosophy is comprised of three central tenets:

1. **CONCEPTUAL MASTERY**: Students should gain a deep understanding of the underlying themes and concepts of the course. This enables students to build intuition as well as transfer skills and knowledge gained from the course to other areas throughout their careers.
2. **EXPERIENTIAL LEARNING**: The most effective ways to learn always involve "hands-on" experience. Students should have numerous opportunities to directly apply the knowledge and skills they are learning to relevant problems and discuss these experiences with their peers.
3. **ACCESSIBILITY, EQUITY, AND INCLUSION**: Students should have the ability to access, pursue, and learn from these opportunities regardless of their background. Students should feel their unique backgrounds and identities strengthen their connection to the material.

To accomplish these goals, I focus on teaching methods that help foster **student engagement** with material by building on a "flipped classroom" setting where students discuss and complete interactive exercises with peers. This presents a valuable framework for building frequent and "low-risk" student participation, encouraging peer collaboration, and lowering barriers to students asking questions.

There is a clear connection between **mental health** and academic success, and as an instructor my responsibility is to foster an environment where students can achieve both. To establish professional relationships with my students built on **empathy and kindness**, I actively emphasize my own history of struggle, failure, and eventual success while simultaneously trying to build connections beyond the scope of the course.

Courses should be explicitly designed to **reward diverse backgrounds**. Specifically, I aim to offer at least one long-term project where students are given substantial autonomy to decide its focus and execution. Subsequently ensuring students have the

resources and support to make these projects a success is crucial to affirming their identity and sense of belonging both within and outside the scientific community.

Finally, as an educator, **I am always looking to learn and grow.** All interactions start with believing in the students that I am privileged to work with and recognizing that they will always have a lot to teach me about being a better instructor. Living up to their expectations as well as my own will require continually tailoring my instruction to best fit their needs.

PAST EXPERIENCE

I am an enthusiastic educator with **5+ years of experience** who has developed curricula and taught courses across **astronomy**, **statistics**, and **data science**.

University of Toronto   2020-Present

In my current position as a Banting & Dunlap Postdoctoral Fellow at the University of Toronto, I developed and am currently teaching two six-week interdisciplinary courses: an introductory course on sampling methods and astrostatistics (Fall 2021) as well as a discussion-based seminar on research ethics and practice in astronomy (Winter 2022).

AST3101H W: Ethics and Practice in Astronomy	Winter 2022
AST3101H F: Introduction to Sampling Methods	Fall 2021

Harvard University   2016-2020

During my graduate studies at Harvard University, I was a Teaching Fellow for five courses ranging from 6-40 students, including both introductory and advanced undergraduate courses for astronomy majors as well as general education courses for non-majors. As part of these courses, I led "flipped classroom" exercises, facilitated discussions on science, society, and inequality, developed and ran data analysis workshops, and helped to mentor independent student projects.

Students gave me **overwhelmingly positive course reviews** (>4.7/5 for all courses) and I also received 3 Certificates of Distinction in Teaching from The Derek Bok Center for Teaching and Learning as well as a **Teaching Award** from the Department of Astronomy.

ASTRON 22: The Unity of Science: From the Big Bang to the Brontosaurus and Beyond	Spring 2020
ASTRON 191: Astrophysics Laboratory	Spring 2019
ASTRON 17: Galactic and Extragalactic Astronomy	Fall 2018
ASTRON 130: Cosmology	Spring 2018

Banneker Institute (Harvard)   2017-2019

The Banneker Institute at Harvard is a summer program that is designed to provide research experience, skills training, and community building for students that have been historically marginalized from astronomy and academia. From 2017-2019, I taught a two-week course on computer programming, statistics, and data analysis to members of the Banneker cohort (along with other summer students). As part of this work, I developed targeted curricula, designed interactive coding and software exercises, and (co-)led flipped classrooms to help give students the confidence and tools they need to tackle problems in their own research projects.

Introduction to Programming in Python   Summer 2019
Introduction to Programming in Python   Summer 2018
Introduction to Programming in Python   Summer 2017