Chirag Gokani

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Education

- **University of Texas at Dallas** — Class of 2021
  B.S. Physics, Minor in Music — *GPA: 3.871*

Honors

- **Eugene McDermott Scholar** - One of twenty-three undergraduates selected for UTD's flagship scholarship; travelled to Santa Fe, Austin, and Washington, D.C. for leadership training; studied classical guitar in Valencia, Spain
- **Collegium V Honors Student** - Took advanced coursework in math, political science, and liberal arts

Research & Teaching Experience

- **University of Texas at Dallas: Physics Department**
  Teaching Assistant — *January - May 2020*
  - Set up and led the undergraduate lab component for Electromagnetism & Waves (PHYS 2126)
  - Taught curriculum that builds up DC and elementary AC circuitry from first principles
- **UTD Cosmology, Relativity, and Astrophysics Group**
  Research Assistant — *June 2017 - December 2018*
  - Numerically treated the General Relativistic three-body problem of inspiraling binary black holes subject to a third perturbing black hole with hopes to explain underlying dynamics of LIGO measurements
  - Catalogued stellar photometry data from *Gaia* to help facilitate an exoplanet survey led by citizen-scientists
- **Advanced Research in Thermo Fluid Systems Lab**
  Research Assistant — *February - August 2019*
  - Measured and catalogued fluid properties of hundreds of samples bovine and human milk
  - Developed models to describe how fat globules affect the velocity-dependent viscosity of various milks
- **Society of Physics Students**
  Astronomy Committee Member — *November 2017 - present*
  - Coordinated large-scale star parties at UTD for major astronomical events, including 2018 & 2019 total lunar eclipses, 2018 opposition of Mars, and 2020 pass of NEOWISE, collaborating with the Texas Astronomical Society
  - Co-led telescope training sessions, exposing community members to a variety of amateur telescopes

Presentations and Projects

- **Pappus's Theorem**, presentation for MATH 3321: Geometry, summer 2020
- **Ballistic Entry: Monte Carlo Simulation**, presentation for PHYS 3330: Numerical Methods, fall 2019
- **Musical Physics: Combination Tones and Binaural Beats of the Heavens**, presented at the Graduate Students in Physics Seminar on October 5th, 2018
- **Explaining the Solar Analema**, an end-of-semester paper for PHYS 3380: Astronomy, fall 2018

*Please visit my **physics page** to see more of my work.*

Technical Skills

- **Languages**: Python, HTML, LaTeX (intermediate proficiency); MATLAB, SQL (elementary proficiency)
- **Technologies and Frameworks**: Anton Paar Rheometry & Density Interfaces, Meade and Celestron telescopes

Volunteering

- **IntelliChoice**
  Branch Manager & Instructor — *January 2018 - present*
  - Directed IntelliChoice SAT Summer Camp (2018-2020), valued at $297,000/year, boosting students' SAT scores by factors of ~ 1.5 and significantly increasing college matriculation rates in the underprivileged community
  - Led volunteer efforts at the Vietnamese Community Center, tutoring math weekly to underprivileged students