Elliot Golias

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EDUCATION

- **Case Western Reserve University** — Cleveland, Ohio
  PhD - Theoretical Particle Physics; GPA: 3.87/4.00 — *August 2016 - August 2022*
  Thesis: *Phenomenological and Cosmological Aspects of Theories for Physics Beyond the Standard Model*
  Awards, Service, & Outreach: *Physics Underrepresented Minorities Student Organization Mentor, Physics Graduate Student Association Website Admin., Center for Education and Research in Cosmology Seminar Coordinator, Hathaway Brown School Science Research and Engineering Program*

- **Kent State University** — Kent, Ohio
  BS - Physics, BA - Mathematics, Minor - Italian Language and Culture; GPA: 3.89/4.00 — *August 2013 - May 2016*
  Thesis: *Optical Reflectivity and Dynamic Light Scattering Study in Thin Smectic-A Liquid Crystal Films*
  Awards, Service, & Outreach: *Phi Beta Kappa, College of Arts and Sciences Distinguished Leadership Award for Mathematics and Physics, Society of Physics Students President, Undergraduate Mathematics Club President, Pearson Award in Physics, John Wiley Award in Physics, Center for Nuclear Research Award*

SKILLS SUMMARY

- **Languages:** Python, LaTeX, C++, MATLAB, Java, SQL
- **Frameworks:** Scikit, Pandas, NLTK, TensorFlow, PyTorch, Qiskit, Pandas, Matplotlib, and more
- **Tools:** GIT, Mathematica, Microsoft Office
- **Platforms:** Linux, Web, Windows, Mac, AWS, HPC Cluster, Twitter API, Alpaca API
- **Foreign Languages:** English (Native), Italian (Professional), Portuguese (Professional), French (Professional)

EXPERIENCE

- **Case Western Reserve University - Department of Physics** — Cleveland, Ohio
  Graduate Teaching Assistant (Full-time) — *August 2018 - Present*
  - **Description:**: Teach and supervise undergraduate introductory physics labs in addition to grading for a variety of undergraduate and graduate-level physics courses

- **Kent State University - Academic Success Center** — Kent, Ohio
  Physics and Mathematics Tutor (Part-time) — *August 2014 - May 2016*
  - **Description**: Tutor students (individually and in group sessions) in undergraduate physics and mathematics courses

SELECTED PUBLICATIONS

- **Two-Higgs-Doublet Model and Quark-Lepton Unification**, Pavel Fileviez Perez, Elliot Golias, Alexis D. Plascencia, ArXiv: 2205.02235 (2022).   Preprint soon to be published

- **Probing Quark-Lepton Unification with Leptoquark and Higgs Decays**, Pavel Fileviez Perez, Elliot Golias, Alexis D. Plascencia, Physical Review D 105 (2022), 075011

- **The Higgs and Leptophobic Force at the LHC**, Pavel Fileviez Perez, Elliot Golias, Alexis D. Plascencia, Journal of High Energy Physics 07 (2020) 087

- **On Anomaly-Free Dark Matter Models**, Pavel Fileviez Perez, Elliot Golias, Rui-Hao Li, Clara Murgui, Alexis D. Plascencia, Physical Review D 100 (2019), 015017

- **Leptophobic Dark Matter and the Baryon Number Violation Scale**, Pavel Fileviez Perez, Elliot Golias, Rui-Hao Li, Clara Murgui, Physical Review D 99 (2019), 035009

ADDITIONAL RESEARCH PROJECTS

- **Twitter Sentiment Analysis and Mean Reversion of Cryptocurrency Prices**: (Work in Progress) Collection of tweets and cryptocurrency data analysis of sentiment using a continuous bag of words model and implementation of a machine learning model to find correlations between global sentiment and ETH prices. Tech: Python, TensorFlow, Pytorch (June '22)