Daniel Krista-Kelsey

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EDUCATION

University of Massachusetts Amherst **Amherst, MA**
Bachelor of Science in Astrophysics **May 2023**

- **GPA:** 3.77/4.00
- **Awards/Honors:** NASA MA Space Grant Fellowship (Research grant), Astronomy Award for Academic Excellence (Outstanding academic performance and GPA), Van Blerkom Scholarship (Academic and research scholarship), 6x Dean's List
- **Course Highlights:** Statistical Mechanics, Quantum Mechanics, Electricity & Magnetism, Classical Mechanics, Computational Physics, Cosmology & General Relativity, Physics Labs (Senior, Thermodynamics, E&M, Mechanics, Modern)
- **Honors Thesis:** "*Characterization of the Source Confusion in the CHILES Con Pol Ultra Deep Radio Continuum*"

EXPERIENCE

METAPHASE **Arlington, VA**
Consultant - Data Analytics Analyst **Feb. 2024 - Present**

- Lead client projects for the DHS CISA School Safety Task Force, delivering high-quality, data-driven solutions aligned with strategic objectives.
- Designed and implemented data automation and analytics tools (Python, PowerShell, VBA, Office Scripts, Power Automate) to streamline workflows, enhance reporting, and reduce manual processing time by over 80%.
- Developed dashboards and visualizations (Power BI, Excel, Google Analytics) to track key metrics, inform decision-making, and present actionable insights to executive and federal leadership.
- Coordinated large-scale communication campaigns and stakeholder engagement, streamlining inbox management to improve outreach efficiency and strengthen client relationships.
- Fostered collaboration and leadership across internal teams and client branches, contributing to recognized successes in project delivery and contract acquisition support.

UNIVERSITY OF MASSACHUSETTS AMHERST **Amherst, MA**
Astrophysics Researcher **May 2022 - Aug. 2023**

- Applied advanced statistical modeling (Lévy α-stable distributions, MCMC) to develop a statistical modeling pipeline that extracted faint-signal stellar populations from noisy data, improving detection sensitivity 2x over comparable datasets.
- Validated methodology by cross-comparing against multiple independent datasets, producing consistent results and enabling high-confidence conclusions on sub-μJy source distributions.
- Co-authored peer-reviewed publication in *The Astronomical Journal* (2025) detailing methodology, statistical modeling approach, and outcomes; presented findings at multiple research conferences and collaboration meetings.

Teaching Assistant, ASTRON 330 **Jan. 2023 – May 2023**

- Assisted in developing and delivering a research-based course using COSMOS2020 and CHILES Con Pol datasets and provided 1-on-1 instruction on astronomical concepts, research techniques, and programming.

Tutor, Department of Astronomy **Jan. 2021 - May 2023**

- Facilitated the Astronomy Help Desk to assist astronomy and physics students in their courses and labs by incorporating analytical and visual teaching methods while providing digestible problem solving techniques.

FIVE-COLLEGE ASTRONOMY DEPARTMENT **Amherst, MA**
Research Intern **May 2022 – Aug. 2022**

- Built and executed Python simulations to quantify the impact of undetected low-signal sources on measurement accuracy, leading to corrective algorithms that improved flux density estimates across the dataset.
- Reconstructed the CHILES Con Pol dataset using algorithmic and mathematical methods (Metropolis-Hastings, Gaussian, Fourier, convolution) to determine the source confusion noise of 1.3 μJy beam^{-1} and unveil underlying dataset artifacts.

ADDITIONAL

ASIAN AMERICAN STUDENT ASSOCIATION **Amherst, MA**
Logistics Coordinator **Dec. 2020 – May 2023**

- Coordinated logistics for monthly events and three annual cultural showcases promoting Asian culture and advocacy, securing $50K+ in funding, increasing budget by 200%, and drawing 10,000+ attendees total with sponsor partnerships, raffles, and celebrity appearances.
- Led recruitment and management of the 20+ executive board members while coordinating interviews and onboarding.

Technical Skills: Excel, PowerPoint, PowerBI, Power Automate, Office 365, Google Suite, Google Analytics, LaTeX
Programming Languages: *Proficient:* Python. *Intermediate*: Visual Basic, Java. *Novice*: C++, C#, SQL, MATLAB, TypeScript
Interests: Music Producer and Engineer, Game Developer, AI Applications, Photoediting, Aspiring Golfer, Avid EDM Enthusiast