

Thomas Seive

Astrotechnologist

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Industry Skills

- Proficient in Python
- + various ML packages
- Basic Mongo
- Basic AWS
- SQL
- Git
- Excel
- Mathematica
- Design Thinking
- Mural

Certifications

IBM EDX Data Science Professional
(May 2022)

Fun Facts

- Fluent French
- Olympic Weightlifting

Experience

I am a passionate data and technology professional who has decided to pivot from academia to the industry. I have 3+ years of big data and data analytics experience from top astronomy research labs in Texas working to answer complex questions. I hope to bring my science-based thinking and unique problem-solving skills into my next role.

Projects

Understanding the transition from dispersion dominance to rotational support in the FIRE-2 simulations (April 2021)

I developed code to access data on the Texas Advanced Computing Center Stampede2 supercomputer that analyzed velocity dispersion in 1,000,000 particle FIRE-2 dwarf galaxies. I presented this research at the UT Undergraduate Research Forum.

Cryptocurrency Price Analyzer (July 2021 - Ongoing)

Using Python, I built a GUI to interact with a locally hosted backend (mongoDB server) that contains historic cryptocurrency prices from Coinbase. This allows for informed decisions on purchases and analysis that is not possible with publicly available tools.

Predicting Successful SpaceX Rocket Reuse (April 2022)

For my IBM Data Science Capstone project, I retrieved, wrangled, and visualized data on past SpaceX rocket launches in order to predict the success of future rocket landings. I tested multiple machine learning models (logistic regression, SVM, KNN, etc.) to optimize my predictions.

Department of Astronomy, University of Texas - Austin / Research Assistant

Sept 2021 - PRESENT, Austin, TX

- Analyzed complex datasets (over 10,000 rows) from the HET LRS2 instrument (i.e., physical data from a sensor) using Python to explore the limitations of a novel astrophysical analysis technique
- Actively collaborated with group members in weekly group meetings to refine research presentations, prep upcoming work cycles, and focus on DEI initiatives within the Astronomy department
- Currently: working on publishing a research paper on the methods and results of the above research; anticipated publication: May 2022

Student Athletics, University of Texas at Austin / Tutor

Feb 2019 - May 2021, Austin, TX

- Refined and curated explanations of complex Astronomy and Physics principles to apply depending on the student
- Tutored over 30 student athletes in Astronomy and Physics
- Attended monthly tutoring development sessions to continue learning best practices for effective teaching and sharing of information

Department of Astronomy, University of Texas - Austin / Undergraduate

Grader-Learning Assistant

August 2018 - May 2020, Austin, TX

- Assessed student work
- Administered assessments
- Conducted and facilitated in-class activities

Education

University of Texas at Austin / B.S. Astronomy, GPA 3.79

August 2017 - May 2021, Austin, TX

Graduate of Distinction with Distinctions in Research

University of Texas at Austin / B.S. Physics

August 2017 - May 2021, Austin, TX

IBM EDX Data Science Foundations/ Certificate

IBM EDX Data Science Professional/ Certificate

May 2022

Ten-course program covering data science methodology, data wrangling and visualization, machine learning models; includes a hands-on Capstone project

Leadership & Community

I am passionate about DEI and creating access to historically restrictive areas of science in order to diversify thoughts and ideas within the space.

Astronomy Students Association, University of Texas at Austin, Austin, TX

September 2017- May 2021 | Member

UT Astronomy DEI Group, University of Texas at Austin, Austin, TX

September 2017- May 2021 | Member