John Bochanski, Ph.D.

bochanski@gmail.com ✴ johnbochanski.com ✴ Holland, PA

Summary

Data-driven scientist with 20+ years of experience analyzing large, complex datasets and leading interdisciplinary teams.

- Expert in Python, SQL, and advanced analytics including causal inference, regression, and machine learning.
- Proven ability to translate complex quantitative findings into clear, actionable insights for diverse stakeholders.
- Founded and chaired an academic department, mentoring faculty and students while managing technical projects from conception through delivery.
- Strong communication skills backed by invited talks, public outreach, and extensive scientific writing.
- Experienced in building reproducible, scalable data workflows and delivering models and metrics that inform high-stakes decisions. US-based, mission-driven, and comfortable working in dynamic, fast-moving environments.

Professional Experience

Rider University / Associate Professor of Computer Science & Physics
✴ September 2014 - 2025, Lawrenceville, NJ ✴ Research Corporation for Science Advancement - Scialog Fellow (2018, 2019)
✴ Chairperson 2019-2025 ✴ AI Faculty Fellow - 2025

Haverford College / Visiting Assistant Professor of Astronomy ✴ August 2012 - August 2014, Haverford, PA

Pennsylvania State University / Postdoctoral Scholar ✴ August 2010 - August 2012, University Park, PA

Massachusetts Institute of Technology / Postdoctoral Scholar ✴ August 2008 - August 2010, Cambridge, MA
✴ SPOT Award Winner 2009, 2010

Skills & Qualifications

Technical Expertise - Accomplished scientist with a variety of problem-solving skills.

- Expert in data analysis. Techniques employed include decision trees, neural networks, regression, Markov Chain Monte Carlo, time-series analysis, and principal component analysis. Proficient in Python and SQL. Experience with git, Tableau, cloud computing environments, Jira/Confluence, and MLOps.
- Developed public and widely used image analysis and control software for multiple facility-class instruments. Authored analysis code for a variety of astrophysical studies. Frequent use of large (TB-scale) datasets.
- Led peer-reviewed studies on the largest databases of low-mass stars ever assembled. Co-Authored over 80 refereed journal articles, with over 26,000 citations. Led 12 first author papers, with over 1,000 citations.

Project Management - Demonstrated ability to lead large and small groups

- Elected co-chair of the largest science collaboration within the highest ranked ground-based effort in Astronomy, the Vera Rubin Observatory. Managed phone conferences, authoring of white papers, and collaboration meetings for an international group of nearly 100 members.
- Founded and chaired the Computer Science and Physics department at Rider, home to over 130 undergraduate and graduate students in three different degree programs and six full-time faculty members.
- Organized a variety of events, including multi-day symposiums at MIT, postdoctoral society social hours at Penn State and public open house events accommodating hundreds of visitors at the University of Washington.

Communication Skills - Extensive technical and non-technical expertise

- Delivered multiple invited reviews at national and international conferences. Referee for multiple journals. Accomplished public speaker, including TedX and Talks @ Google, and multiple appearances in local media.
- Blog author for *Sky & Telescope* Magazine. Authored many online and print articles, distilling recent astronomical results for the general public.

Education

University of Washington / Ph.D. in Astronomy
August 2002 - August 2008, Seattle, WA ✴ Namesake of Asteroid 141414 - Bochanski

Villanova University / B.S. in Astronomy & Astrophysics
August 1998 - May 2002, Villanova, PA ✴ Magna Cum Laude, Phi Beta Kappa, Phi Kappa Phi, Sigma Pi Sigma, Goldwater Scholar