

# Nick Hand, PhD

Technologist | Data Scientist | Educator

[nickhand.dev](https://nickhand.dev) • [linkedin.com/in/nickhandphl](https://linkedin.com/in/nickhandphl) • [github.com/nickhand](https://github.com/nickhand)

## PROFESSIONAL SUMMARY

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Data scientist and technologist with a PhD in astrophysics and more than a decade of Python experience across the modern data science toolkit. Experience spans financial-services consumer protection, technology policy (AI/ML, data privacy, and algorithmic bias), and civic data, with a record of leading technical teams, building widely used interactive data visualizations, and communicating complex findings to executive and public audiences.

## AREAS OF EXPERTISE

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- Python and the modern data science toolkit (10+ years), including advanced statistical analysis and AI/ML algorithms
- Geospatial analysis techniques and GIS software tools
- Data visualization and frontend web development (JavaScript, TypeScript, HTML, CSS, Vue)
- Consumer protection law and technology in the financial services sector
- Technology policy: AI/ML, ad tech, data privacy and surveillance, and algorithmic bias
- Designing, executing, and managing data-driven research projects and technical products
- Leading technical teams to deliver results on tight timelines
- Communicating and presenting complex technical findings to non-technical, executive, and public audiences

## PROFESSIONAL EXPERIENCE

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### Senior Analytics Manager

April 2025 – Present

Voyatek

- Lead a team of five analysts developing data engineering and analytics solutions for the Internal Revenue Service as part of anti-money laundering compliance exams.

### Enforcement Technologist

September 2023 – April 2025

Consumer Financial Protection Bureau (CFPB)

- Key contributor to the Enforcement Division technologist team that developed new case investigations, provided key insights to cross-functional case teams on a range of technology topics, and identified new opportunities for improving operational efficiency.
- Identified and developed technical strategies to achieve CFPB goals related to AI and machine learning, algorithmic bias, and data security by researching, developing, and pitching new cases in those priority areas.
- Led cross-Bureau collaborations on data security and contributed to cross-functional work products on AI/ML underwriting and data privacy policy issues.

### Lecturer, Master of Urban Spatial Analytics

September 2019 – January 2024

University of Pennsylvania

- Taught the [Geospatial Data Science in Python](#) course once per school year in the Master of Urban Spatial Analytics (MUSA) program in the Weitzman School.
- Developed the course curriculum from scratch, covering a wide range of data visualization, data science, and machine learning techniques using a Python stack with real-world case studies in urban planning and public policy.

## Director of Finance, Policy, and Data

February 2018 – September 2023

City Controller's Office, City of Philadelphia

- Led a team producing data-driven policy reports focused on fraud, waste, and abuse in the City of Philadelphia, including property tax assessments, gun violence, spending, budget, and taxes.
- Designed, developed, and deployed multiple custom interactive data visualizations, including a [Gun Violence Dashboard](#) (thousands of monthly views) and the [ProgressPHL](#) neighborhood well-being dashboard.

## EDUCATION

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### University of California, Berkeley

2017

PhD in Astrophysics

- Co-authored papers with thousands of citations, including six first-author papers (more than 700 citations).
- DOE Office of Science Research Fellow.
- National Science Foundation Graduate Research Fellow.

### Princeton University

2011

Bachelor of Arts in Astrophysics, Certificate of Computing

- Graduated summa cum laude; elected to Phi Beta Kappa.
- Thesis work recognized as a top 10 physics breakthrough of 2012 by Physics World.

## ACTIVITIES & RECOGNITION

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- [Guest contributor](#), The Philadelphia Citizen.
- Mentor, inaugural Harvard Climate Justice Design Fellowship (Class of 2022).
- Keepers Program, Leadership Philadelphia (Class of 2022).