

# Nathan Basch

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## WORK EXPERIENCE

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### Indigo Ag, Boston, MA

Jun 2020 – Present

*Staff Data Scientist, Nov 2024 – Present*

*Senior Data Scientist, Oct 2023 – Nov 2024*

*Data Scientist, Sep 2021 – Oct 2023*

*Associate Data Scientist, Jun 2020 – Sep 2021*

- **Innovation:** Led innovation initiatives within Indigo's corporate development team, combining modeling, product strategy, and project management to rapidly test new business concepts. Developed KPIs, drove cross-functional alignment, and managed fast-paced pilot projects designed to fail or scale quickly. Stepped into technical work as needed, from designing MVPs to analyzing early customer signals.
- **Modeling:** Built and deployed a Random Forest model to predict field-level agricultural emissions using weather, soil, and satellite data. Delivered results and uncertainty metrics in interactive R Markdown reports; integrated outputs into Indigo's sustainability platform.
- **Rapid prototyping:** Built customer-facing interactive maps and visualizations using R Shiny ([example](#)), deploying prototypes via Docker, Posit Connect, and Streamlit. Led cross-functional teams (commercial, product, and engineering) to scope and implement features from prototype to production.
- **Data Engineering:** Unified over 1 billion rows of misaligned third-party vendor data to standardize local grain prices and identify grain elevators on key transport routes. Developed a system to track and update Indigo's internal grain facility database in response to market changes.
- **Agriculture Expertise:** Cultivated deep subject matter expertise through collaborative partnerships with grain marketing experts. Leveraged domain insights to enhance quantitative research and models.

### The Brattle Group, Boston, MA

Sep 2016 – Nov 2019

*Senior Research Analyst, Jul 2018 – Nov 2019*

*Research Analyst, Sep 2016 – Jul 2018*

- Conducted statistical analysis for antitrust and IP litigation; drafted expert testimony on 30+ cases.
- Led project lifecycle: scoped analyses, managed timelines, interfaced with clients, and delivered findings.
- Built web app using Python and R Shiny to analyze millions of emails for white-collar crime investigations.
- Developed domain expertise on USPS operations; used econometrics to model seasonality in mail volume.
- Created an interactive R Shiny app powered by a custom neural network for a client project in sports performance analytics.

### Protagonist Technology (formerly Monitor 360), Washington D.C.

May - Aug 2015

*Analytics Intern*

- Consulted for government organizations; performed sentiment analysis of newspaper articles in R to analyze public perceptions of the Mexico-U.S. border.

## SKILLS

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- **Technical:** Machine Learning (tidymodels, scikit-learn), Data Visualization (ggplot2, plotly), Mapping (QGIS, leaflet) Data Wrangling (dplyr, data.table, pandas)
- **Programming:** R, R Shiny, R Markdown, Python, Streamlit, SQL
- **Tools:** Git, Docker, Looker, QGIS, Posit Connect

## EDUCATION

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### The George Washington University

Washington, D.C

*Bachelor of Science in Economics, Minors in Statistics, Jazz Studies*

June 2016

**Honors:** Summa Cum Laude, ODE Economics Honors Society

**Awards:** GW Outstanding Academic Achievement Award, Steiner and Meyer Music Scholarship