Trey Hendrix

Data Analyst · Behavioral Ecologist

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Objective

Detail-oriented data analyst seeking to leverage and grow my statistical, programming, logistical, and communication skills to provide actionable insights from diverse data sources.

Professional Experience

Rutgers University, School of Arts and Sciences – Dean's Office *New Brunswick, NJ*

Data Analyst *Aug 2025 — Present*

- Build data pipelines, dashboards, and analytic reports behind the Dean's Office's decision-making, working primarily in Python, PostgreSQL, and Tableau.
- Benchmark the university against peer institutions using federal IPEDS data, including a public Tableau dashboard comparing degree completions across the Big Ten.
- Analyze workforce data for the Dean's Office, producing headcount dashboards and a staff attrition analysis.
- Measure classroom and meeting room utilization from Outlook calendar bookings to support space planning.
- Scrape, structure, and analyze curriculum data from internal systems, including course prerequisite structure and program complexity.
- Write ETL scripts (Python and SQL) that consolidate human resources, academic program, space, and external data for dashboards and reports.

Trillium Trading *New York, NY*

Data Analyst *(Sep 2023 — Aug 2025)* *Jun 2023 — Aug 2025*

- Developed quantitative forecasting and risk management models to support strategic decisions for managers and traders.
- Engineered and maintained a centralized database and ETL pipeline in R and MySQL to automate data collection and processing.
- Built and deployed interactive apps and dashboards with R Shiny, Python Dash, and Power BI, providing managers with real-time insights.
- Integrated conversational-AI chatbots into reporting tools so stakeholders could retrieve KPIs through natural-language queries.
- Partnered with managers and traders to define KPIs and deliver tailored reports and dashboards.

Data Analyst Intern *(Jun 2023 — Sep 2023)*

- Authored analytics reports evaluating the effect of a firm initiative on trader success.
- Produced customized KPI reports for traders and cleaned historical firm data.

Research Experience

Princeton University *Princeton, NJ*

Graduate Student Researcher — Greater Anis (Riehl Lab) *Sep 2019 — Dec 2022*

- Used a long-term data set to investigate what factors influence sex allocation in a tropical bird.
- Organized, cleaned, and documented an 11-year data set.
- Performed best-subset model selection and validation in R.
- Produced a journal article published in *Behavioral Ecology and Sociobiology*.
- Built an agent-based model in R that simulated the evolution of brood-parasitic behaviors in the Greater Ani.

Graduate Student Researcher — Carolina Wrens (Riehl Lab)

- Designed a research project investigating territorial behavior, mating system, and dispersal in Carolina Wrens.
- Developed protocols and pipelines for data entry, processing, and backups through daily R Markdown reports, and generated interactive maps for data collection.
- Led and trained a field crew of three undergraduates and advised two thesis students.
- Negotiated with landowners and stakeholders at 11 field-site properties.
- Secured $14,000 in grants to support research.

University of Illinois Urbana-Champaign *Fort Hood, TX*

Seasonal Field Biologist (Ward Lab) *Mar 2019 — Jul 2019*

- Monitored breeding Black-capped Vireos (*Vireo atricapilla*) for the species' post-delisting monitoring plan.
- Target-netted and banded vireos, re-sighted color-banded birds, delineated territories, located and monitored nests, and ran distance-sampling surveys.
- Visualized location data in ArcGIS and entered and verified data.

Cornell University *Bunya Mountains, QLD*

Field Assistant (Reeve Lab) *Aug 2018 — Dec 2018*

- Collected data on how local competitive environment and individual experience affect courtship signaling in Satin Bowerbirds (*Ptilonorhynchus violaceus*).
- Assisted with trapping and banding, bower searching and monitoring, and camera installation and maintenance at bowers.

Emporia State University *Ellinwood, KS*

Nest Technician (Jensen Lab) *May 2018 — Jul 2018*

- Assessed the impact of grazing, seed mixtures, and precipitation on the nesting success of threatened grassland birds on CRP land.
- Located nests with the rope-drag method and behavioral observations and monitored them for success.
- Took blood samples and morphological measurements from Dickcissel (*Spiza americana*) nestlings and prepared blood plasma for storage.

Woodlands Conservancy *Belle Chasse, LA*

Bird Banding Intern *Jan 2018 — May 2018*

- Assisted with passerine and near-passerine banding: extracting birds from mist nets, processing, net assembly and maintenance, and area-search surveys.
- Entered, proofed, and analyzed banding data.
- Authored a report in R depicting trends in the banding data and describing community composition and change.

Tulane University *New Orleans, LA*

Laboratory Research Assistant (Van Bael Lab) *(Jun 2017 — May 2018)* *Jan 2016 — May 2018*

- Designed and ran a greenhouse experiment investigating a suspected fungal pathogen in bald cypress seedlings.
- Worked as a lab technician: DNA extraction, microbe culturing, PCR, and plant care.
- Collaborated on a flooding experiment and coauthored a publication in *Plant Ecology*.

Undergraduate Researcher (Karubian Lab) *(Jan 2016 — May 2018)*

- Proposed and conducted field research near Brisbane, Australia on social behavior in Red-backed Fairywrens (*Malurus melanocephalus*).
- Led a collaboration of 16 researchers, combining data from four studies and using logistic mixed-effects models in R to identify factors influencing social behaviors.
- Wrote a peer-reviewed journal article published in *Emu — Austral Ornithology*.

Publications

Hendrix, T.C. and C. Riehl (2023) No evidence for adaptive sex ratio adjustment in a cooperatively breeding bird with helpful helpers. *Behavioral Ecology and Sociobiology* 77:80. https://doi.org/10.1007/s00265-023-03355-1

Hendrix, T.C., F. Fernandez-Duque, S. Toner, L.G. Hitt, R.G. Thady, M. Massa, S.J. Hagler, M. Armfield, N. Clarke, P. Honscheid, S. Khalil, C.E. Hawkins, S.M. Lantz, J.F. Welklin, J.P. Swaddle, M.S. Webster, and J. Karubian (2023) Behavioural differences between ornamented and unornamented male Red-backed Fairywrens (Malurus melanocephalus) in the non-breeding season. *Emu - Austral Ornithology* 123(2):176-181. https://doi.org/10.1080/01584197.2023.2182224

Torres-Martínez, L., M. Sánchez-Julia, E. Kimbrough, **T.C. Hendrix**, M. Hendrix, R.H. Day, K.W. Krauss, and S.A. Van Bael (2020) Influence of soil microbiota on Taxodium distichum seedling performance during extreme flooding events. *Plant Ecology* 221:773-793. https://doi.org/10.1007/s11258-020-01059-4

Education

University of Colorado Boulder — *Boulder, CO (online)*
MS Data Science — *May 2024 — Present*
4.0/4.0 GPA

Princeton University — *Princeton, NJ*
MA Ecology and Evolutionary Biology — *Sep 2019 — Dec 2022*
Advised by Dr. Christina Riehl; 4.0/4.0 GPA

Tulane University — *New Orleans, LA*
BS Ecology and Evolutionary Biology — *Aug 2014 — May 2018*
Spanish Minor; 4.0/4.0 GPA

Skills

Tools and Languages	R, Python, SQL, Git, Tableau, Power BI, Excel, LaTeX, ArcGIS/QGIS
Quantitative Research	Analytic reports, Dashboards, Data management, Data visualization, Linear mixed-effects modeling, Model selection, Agent-based modeling
Domain Knowledge	Risk management, Financial markets, Equity trader KPIs, Avian field ecology
Communication	English, Spanish (CEFR B2)

Grants & Fellowships

2022	**Mary and Randall Hack '69 Award**, High Meadows Environmental Institute	*$7,000*
	Student Research Award, American Ornithological Society	*$2,500*
2021	**Paul A. Stewart Grant**, Wilson Ornithological Society	*$1,000*
	COVID-relief Research Award, American Ornithological Society – returned	*$1,000*
	Summer Start-up, Department of Ecology & Evolutionary Biology, Princeton University	*$2,500*
2017	**Undergraduate Fellow**, Department of Ecology & Evolutionary Biology, Tulane University	*$800*
	Ching Grant, Tulane University	*$1,000*
2016	**Taylor Travel & Enrichment Grant**, Tulane University	*$1,000*
	International Research Experience for Students (IRES) Fellowship, National Science Foundation	*$6,000*

Awards

2020 **Graduate Research Fellowship Program Honorable Mention**, National Science Foundation
Elected to Sigma Xi Honor Society

2019 **Graduate Research Fellowship Program Honorable Mention**, National Science Foundation

2018 **Elected to Phi Beta Kappa Honor Society**
Elected to William Wallace Peery Society, Tulane University
Fred R. Cagle Memorial Prize, Tulane University
Senior Scholars Award: Ecology & Evolutionary Biology, Tulane University

Teaching Experience

Spring 2020	**Behavioral Ecology (EEB313)**, Assistant in Instruction	*Princeton*
Fall 2019	**Life on Earth (EEB211)**, Assistant in Instruction	*Princeton*
Spring 2018	**Diversity of Life Laboratory (EBIO1015)**, Teaching Fellow	*Tulane*
Fall 2017	**Diversity of Life Laboratory (EBIO1015)**, Teaching Fellow	*Tulane*

Mentoring

2022-2023	**Samuel Vasen**, Senior Thesis Student, Princeton University
2022	**Kathryn Farrell**, Summer Intern, High Meadows Environmental Institute
2021-2022	**Willow Dalehite**, Senior Thesis Student, Princeton University

Presentations

Poster Presentations

Hendrix, T.C., A. Savagian, and C. Riehl. (2020) Nestling Sex Ratios in a Cooperatively Breeding Cuckoo. Animal Behavior Society Conference. Virtual

Hendrix, T.C., M. Hendrix, E. Kimbrough, and S.A. Van Bael. (2018) Evaluating the Impact of a Suspected Pathogen on Baldcypress Seedling Growth. Ecological Society of America Annual Meeting. New Orleans, LA

Hendrix, T.C., L. Torres-Martínez, M. Hendrix, M. Sanchez Julia, E. Kimbrough, and S.A. Van Bael. (2018) Influence of Root Fungi on the Resilience of Swamp Cypress Seedlings to Extreme Climate Events. CELT Student Research Poster Day. New Orleans, LA

Hendrix, T.C., S. Toner, S. Lantz, J. Welklin, F. Fernandez-Duque, J.P. Swaddle, M.S. Webster, and J. Karubian. (2017) Ornamental plumage in the nonbreeding season is associated with behavioral change in a tropical passerine. Evolution Annual Conference. Portland, OR

MacPherson, M., C. Lister, **T.C. Hendrix**, and A. E'etessam. (2016) Are migratory birds tracking rain?. Tulane School of Science and Engineering Research Day. New Orleans, LA

Outreach

2021	**Outreach Facilitator (Friends of Hopewell Valley Open Space)**, Led a field trip on local avian diets, nesting, and migration for high school students from underrepresented backgrounds.
2020–2022	**Curriculum Designer (Prison Teaching Initiative, NJ-STEP)**, Worked with a small team to redesign the curriculum of an environmental science course.
2020–2022	**Mentor (EEB Scholars Program, Princeton University)**, Provided advice and feedback on application materials to students from underrepresented backgrounds interested in graduate studies in ecology.
2019	**Volunteer Bander (Branch of Environmental and Cultural Resources Management)**, Assisted with two bird-banding outreach events.
2017	**Outreach Volunteer (Boys at Tulane in STEM)**, Helped run a fungal-endophyte workshop designed to inspire boys to consider careers in STEM.
2015–2016	**Urban Farm Volunteer (Hollygrove Market and Farm)**, Weeded and maintained the gardens and crops.
2015	**Study Abroad Student / Volunteer (International Service Learning Program, San José, Costa Rica)**, Worked with Hogar Crea, a rehabilitation facility for young men with drug and alcohol problems; tutored children in local primary and secondary schools; planted trees and collected litter.
2015	**Tutor (Tulane University Community Advancement Network)**, Tutored and supervised children at the Boys and Girls Club NFL YET Center.