

## Alexander E. Bendeck

School of Interactive Computing, Georgia Institute of Technology  
[abendeck3@gatech.edu](mailto:abendeck3@gatech.edu) | [alexanderbendeck.github.io](https://github.com/alexanderbendeck)



### Education

---

**Georgia Institute of Technology (Georgia Tech)**, Atlanta, GA **Fall 2021 – Present**

Ph.D. in Computer Science

- Advisor: Prof. John Stasko
- GPA: 4.0/4.0
- Courses: Data Visualization, Human-Computer Interaction, Data & Visual Analytics

**Duke University**, Durham, NC **Fall 2017 – Spring 2021**

B.S. in Computer Science and Statistical Science, *Summa Cum Laude*

- GPA: 4.0/4.0
- Courses: Machine Learning, Data Mining, Statistical Computing, Database Systems

### Research Interests

---

Large language models for visualization, AI-assisted visual data analysis, maps & geographic data

### Research Experience

---

**Georgia Tech Visualization Lab**, Graduate research assistant **Spring 2022 – Present**

Advised by Prof. John Stasko

- Currently studying how to integrate large language models with visual data visualization systems to scaffold and enhance the process of interactive visual data analysis
- Built geographic visualizations to help users understand migration flows in the U.S.
- Helped collaborators design experimental stimuli to represent electric grids

**Chu Data Lab**, Graduate research assistant **Fall 2021**

Advised by Prof. Xu Chu

- Developed and implemented algorithms for a weakly supervised entity matching system

**Duke Database Research Group**, Research assistant **Fall 2019 – Fall 2020**

Advised by Prof. Jun Yang and Prof. Sudeepa Roy

- Created and revised interface designs for an interactive SQL debugger; reviewed literature to investigate the scope of similar prior work and inform design decisions
- 2020 CS+ Summer Research Program: Implemented front-end designs (HTML, JavaScript) and query parsing algorithms (Java); designed a plan to test debugger's efficacy in Fall 2020

**Duke Motivated Cognition & Aging Brain Lab**, Research assistant **Summer 2018 – Spring 2021**

Advised by Prof. Gregory Samanez-Larkin

- Conducted statistical analyses to investigate the effects of text message-based health interventions on physical activity
- Wrote Python code to collect and analyze participant data for neuroscience studies

### Publications

---

**Robin: An Interactive Visualization System and Instructional Tool to Democratize United States Domestic Migration Data.**

- [Alexander Bendeck](#), Clio Andris, and John Stasko. To appear in *Hawaii International Conference on System Sciences (HICSS)*, 2025.

**An Empirical Evaluation of the GPT-4 Multimodal Language Model on Visualization Literacy Tasks.**

- [Alexander Bendeck](#) and John Stasko. To appear in *IEEE Visualization and Visual Analytics (VIS), 2024*.

**SlopeSeeker: A Search Tool for Exploring a Dataset of Quantifiable Trends.**

- [Alexander Bendeck](#), Dennis Bromley, and Vidya Setlur. *ACM Conference on Intelligent User Interfaces (IUI), 2024*.

**Ground Truth Inference for Weakly Supervised Entity Matching.**

- Renzhi Wu, [Alexander Bendeck](#), Xu Chu, and Yeye He. *ACM SIGMOD International Conference on Management of Data, 2023*.

**Text Mining and Spatial Analysis of Yelp Data to Support Socially Vibrant Cities.**

- [Alexander Bendeck](#) and Clio Andris. *11th International Workshop on Urban Computing, 2022*.

**I-Rex: An Interactive Relational Query Explainer for SQL.**

- Zhengjie Miao, Tiangang Chen, [Alexander Bendeck](#), Kevin Day, Sudeepa Roy, and Jun Yang. *Proceedings of the VLDB Endowment (PVLDB), Vol 13, Demonstration Track, 2020*.

**Teaching Experience**

---

**Georgia Tech CSE 6242 (Data & Visual Analytics), Teaching assistant (TA)      Fall 2024 – Present**

- Grade projects and hold virtual Q&A sessions for an online master’s course

**Georgia Tech CS 6730 (Data Visualization Principles), TA      Fall 2023**

- Graded assignments and held regular office hours

**Duke COMPSCI 230 (Discrete Math), Undergraduate TA      Fall 2020**

- Graded assignments and held regular office hours

**Duke COMPSCI 101 (Intro to CS)**

Head undergraduate TA      **Spring 2019 – Fall 2019**

- Revised course assignments and improved assignment auto-grading system based on student feedback; oversaw grading of assignments by other TAs
- Co-programmed and deployed a web app for exam prep used by over 120 students

Undergraduate TA      **Fall 2018**

- Graded assignments and held regular office hours

**Duke Mathematics Department, Office hours staff member      Spring 2018**

- Tutored Duke students enrolled in MATH 212 (Multivariable Calculus)

**Honors & Awards**

---

**Georgia Tech Goizueta Foundation Fellow      Fall 2023**

- Received a 2-year financial award for exceptional Georgia Tech Ph.D. students of Hispanic/Latino origin

**Georgia Tech President’s Fellow      Fall 2021**

- Received a 4-year financial award for highly qualified Georgia Tech Ph.D. applicants in the top 10% of their application pool

**Phi Beta Kappa Honor Society inductee      Spring 2021**

- Selected based on record of high academic achievement

**Duke University Dean’s List with Distinction      Fall ’17, ’18, ’19; Spring ’18, ’19**

- Awarded in every eligible semester for placement in the top 10% of Arts & Sciences undergraduates by GPA

**Duke Undergraduate Research Support Small Grant recipient      2018-19 Academic Year**

- Received funding for my work as part of a neuroscience research study team

**Florida Engineering Society Scholarship recipient      Spring 2017**

- Received a \$1000 merit scholarship based on high school record and STEM interest

## 2017 National Merit Scholarship Finalist

Spring 2017

- Named as a finalist for the 2017 National Merit Scholarship

## *Professional Experience*

---

**Tableau Research**, Research intern

Summer 2023

Mentored by Dennis Bromley and Vidya Setlur

- Developed novel algorithms for semantic labeling and search of trends in line charts, as well as a prototype system to demonstrate the approach's efficacy

## *Activities & Mentoring*

---

**Georgia Tech Latino Organization of Graduate Students**

Vice President

Fall 2024 – Present

- Assist the President with administrative duties, help run executive board meetings, and represent the organization at networking and social events

Internal Outreach Committee chair

Fall 2023 – Summer 2024

- Organized graduate student mentorship program, faculty panels, and networking opportunities for new and prospective graduate students

Member

Fall 2021 – Present

- Helping to facilitate mentorship and networking events for graduate students

**GVU Brown Bag Talks**, Student organizer

Spring 2023

- Coordinated graduate student “lightning talks” for the GVU Brown Bag seminar series

**Duke Statistical Science Majors Union**, Member and student mentor

Fall 2020 – Spring 2021

- Mentored two first-year students interested in data science for the 2020-21 school year

**Duke Mi Gente Cultural Organization**, Member and student mentor

Fall 2019 – Spring 2021

- Mentored one first-year student in the “Mi Familia” program for the 2020-21 school year
- Mentored three first-year students in the “Mi Familia” program for the 2019-20 school year

## *Service*

---

- **Reviewer:** IEEE VIS Conference (2023, 2024), EuroVis Conference (2024), *IEEE TVCG Journal* (2024), *Information Visualization Journal* (2024)

## *Skills*

---

- **Programming:** Python (NumPy, sklearn, Pandas, PyTorch, Flask), R (dplyr, rshiny, plotly, leaflet), JavaScript (React.js, Vue.js, D3.js), HTML/CSS, MATLAB, SQL
- **Productivity:** Git, GitHub, Zoom, Slack, Microsoft Teams, LaTeX
- **Languages:** English (native language), Spanish (elementary proficiency)