Alexander E. Bendeck

School of Interactive Computing, Georgia Institute of Technology
abendeck3@gatech.edu | alexanderbendeck.github.io

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

Data visualization, visual analytics, maps and geographic data, visualization design methodologies

Research Experience

Georgia Tech Visualization Lab, Graduate research assistant   **Spring 2022 – Present**
Advised by Prof. John Stasko
- Working on geographic visualizations to help domain expert and non-expert users understand migration flows within the U.S.
- Helping 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 and 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

Ground Truth Inference for Weakly Supervised Entity Matching.
- Renzhi Wu, <u>Alexander Bendeck</u>, 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.
- <u>Alexander Bendeck</u> and Clio Andris. *11th International Workshop on Urban Computing, 2022*.

I-Rex: An Interactive Relational Query Explainer for SQL.
- Zhengjie Miao, Tiangang Chen, <u>Alexander Bendeck</u>, Kevin Day, Sudeepa Roy, and Jun Yang. *Proceedings of the VLDB Endowment (PVLDB), Vol 13, Demonstration Track, 2020.*

Teaching Experience

Georgia Tech CS 6730 (Data Visualization Principles), Teaching assistant (TA)　　**Fall 2023**
- Grade assignments and hold 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 an fMRI scan as a pilot tester for a neuroscience research study

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
Internal Outreach Committee chair   **Fall 2023 – Spring 2024**
  - Organize graduate student mentorship program, faculty panels, and networking opportunities for new and prospective graduate students

Member   **Fall 2021 – Present**
  - Help 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)

Skills

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