

Ethan Heck

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EDUCATION

- **Union Common Wealth University** Barbourville, Kentucky
B. Sci Biology; GPA: 3.8
- **University of Kentucky** Lexington, Kentucky
MS Biostatistics; GPA: 4.0

EXPERIENCE

- **Kentucky Department for Public Health** Frankfort, KY
Student Intern
 - **ATLAS:** Co-developed an R Shiny dashboard for neurological oncology research. Led implementation of the survival analysis components, including Kaplan–Meier curves, survival function calculations, and pairwise group comparisons.
 - **BRFSS:** Led development of an internal interactive dashboard for the CDC Behavioral Risk Factor Surveillance System. Created dynamic visualizations, automated data updates, and downloadable PDF reporting features.
 - **REDCap and Web Content:** Designed and maintained REDCap surveys and contributed to website updates supporting planning for the 2026 MRC Summit.
- **University of Kentucky** Lexington, KY
Instructional Aide
 - **BST 230: Statistical Thinking in Public Health:** Assisted in teaching statistical reasoning and public health applications. Supported grading of exams, papers, and assignments for accuracy and consistency, and provided in-class guidance to students.
 - **CPH 455: Public Health Practice and Policy:** Supported instruction in public health communication and policy. Assisted students during class sessions and aided the instructor in reviewing written assignments and assessments.
- **Bluegrass Community and Technical College** Lexington, KY
Tutor
 - **Mathematics and Statistics Tutoring:** Worked directly with students during mathematics courses to reinforce difficult concepts and improve comprehension. Provided personalized one-on-one tutoring across a range of subjects, including statistics, algebra, and discrete mathematics.

SKILLS

- **Fluent:** R (tidyverse, ggplot2, Shiny), SAS (GLM, GLIMMIX, LIFETEST, MIXED)
- **Proficient:** Python (pandas), SQL, Git, LaTeX
- **Statistical Modeling:** Linear & Logistic Regression, Poisson/Negative Binomial Regression, Generalized Linear Models, Survival Analysis (Kaplan–Meier, Cox PH), Mixed Models (LME/GLMM), Categorical Data Analysis, ROC/AUC Analysis
- **Tools & Methods:** Data Visualization, Data Wrangling, Reproducible Reporting (Quarto/RMarkdown), Dashboard Development, Study Design

PROJECTS

- **ATLAS Oncology Dashboard:** Developed an interactive oncology research dashboard using R Shiny to support neurological tumor survival research. Implemented Kaplan–Meier curves, survival function estimates, confidence intervals, and pairwise log-rank comparisons. Built modular server logic and tidyverse pipelines for dynamic patient outcome exploration.
- **BRFSS Public Health Dashboard:** Created an internal dashboard for the Kentucky Department for Public Health using CDC BRFSS data. Implemented dynamic filtering, automated data updating, and downloadable PDF reporting. Designed custom ggplot2 visualizations enabling efficient review of statewide health indicators.

ACHIEVEMENTS AND RESPONSIBILITIES

- **Arthur E. Spurlock Business Award:** Awarded to freshmen at Union Commonwealth University demonstrating exceptional potential in business based on academic performance and in-class engagement.
- **Ledford Scholar (2021, 2022):** Competitive undergraduate research grant from the Appalachian College Association supporting novel student-led research projects. Awarded based on a formal research proposal and application.
- **Sharp Scholarship:** Full-tuition scholarship awarded to incoming freshmen at Union Commonwealth University with an ACT score of at least 27 and GPA of at least 3.5.
- **Student Advocacy Board Representative:** Selected MS student representative for the University of Kentucky College of Public Health to provide structured feedback to program leadership.
- **President's List:** Union Commonwealth University — Fall 2020, Fall 2021, Spring 2023.
- **Dean's List:** Union Commonwealth University — Fall 2022, Spring 2022.

RELEVANT COURSEWORK

- Survival Analysis, Generalized Linear Models, Linear Regression and ANOVA, Generalized Linear Mixed Models, Longitudinal Data Analysis Methods, Design and Analysis of Clinical Trials, Epidemiology

REFERENCES

- Dr. Adam Berrones — Data Analytics Manager, Kentucky Department for Public Health
adam.berrones@ky.gov — (954) 495–5657
- Dr. Amanda Ellis — Vice Chair of Biostatistics, University of Kentucky
amanda.ellis@uky.edu
- Libby Megna — Assistant Professor of Biology, Union Commonwealth University
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