Austin Zane

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Education

University of California, Berkeley   *Berkeley, CA*
PH.D., STATISTICS   *2021 - Present*

Texas A&M University   *College Station, TX*
B.S., MAJORS IN STATISTICS, APPLIED MATH (WITH HONORS), MINOR IN COMPUTER SCIENCE   *2017 - 2021*
- Major GPA: 4.0, Overall GPA: 3.965

Publications

Sun, S., Zane, A., Fulton, C., & Philipoom, J. *Statistical and Bioinformatic Analysis of Hemimethylation Patterns in Non-Small Cell Lung Cancer.* **BMC Cancer, 21, 268 (2021).** https://doi.org/10.1186/s12885-021-07990-7

Experience

Deep Learning Theory Summer School at Princeton   *Princeton University*
STUDENT   *Jul. 2021*
- Attended courses and a variety of short talks delivered by researchers in both industry and academia.

Summer Program in Biostatistics at Harvard T.H. Chan S.P.H.   *Harvard University*
STUDENT RESEARCHER   *Jun. 2020 - Jul. 2020*
- Principal Investigator: Dr. Briana Stephenson
- Analyzed population data from the CDC's National Health and Nutrition Examination Survey.
- Highlighted cardiovascular disease risk factor disparities associated with race and socioeconomic variables.
- Worked with survey sample design (sample weights), data wrangling, regression analysis, and specialized R packages.

Statistics Summer Undergraduate Research Experience   *Texas A&M University*
STUDENT RESEARCHER   *Apr. 2020 - Nov. 2020*
- Principal Investigator: Dr. Huiyan Sang
- Built and deployed a COVID-19 mobility dashboard using Shiny, R, and 300GB of cell phone location data from Safegraph Inc.
- Focused on spatiotemporal analysis and its association with sociodemographic variables.
- Collaborated with researchers from UT School of Public Health and Rice University to adapt the dashboard for Houston.
- Presented dashboard to TAMU COVID-19 task force and local government. Available from **shinyapps.io**.

NSF Research Experience for Undergraduates   *Texas State University*
TEAM LEAD   *Jun. 2019 - Sep. 2020*
- Principal Investigator: Dr. Shuying Sun
- Analyzed massive genetic datasets using R, Bash, then various statistical methods, including Wilcoxon signed-rank test.
- Resulted in a paper titled "Statistical and Bioinformatic Analysis of Hemimethylation Patterns in Non-Small Cell Lung Cancer" that has been accepted by BMC Cancer for publication

NSF Undergraduate Research   *Texas A&M University*
STUDENT RESEARCHER   *Jan. 2019 - May. 2019*
- Principal Investigator: Dr. Huiyan Sang
- Focused on the development of algorithms for analysis of spatiotemporal datasets.
- Tracked maritime vessels in a harbor using sparse location data.

Honors & Awards

2020	**G. Alan Cannon '88 Endowed Scholarship**,	Dept. of Math.
2020	**Melvin Hamilton '71 Memorial Endowed Scholarship**,	College of Science
2019	**Madhava Prize in Analysis Award**, Top student in MATH 446: Honors Principals of Analysis	Dept. of Math.
2019	**Classroom Excellence Award**, Top student in MATH 409: Honors Advanced Calculus	Dept. of Math.
2017	**National Hispanic Scholarship Award**, Awarded every semester	Texas A&M
2017	**Dean's Honor Roll**, All eligible semesters	Texas A&M

Posters & Presentations

2020	**Texas A&M Emergency Management Advisory Group**, Mobility Dashboards	Texas A&M U.
2020	**Statistics Undergraduate Project Showcase**, Predicting Count of Accidents on Given Day	Texas A&M U.
2020	**Pipelines into Biostatistics 2019 Symposium**, Harvard Cardiovascular Disease Research	Harvard U.
2019	**American Society of Human Genetics 2019 Conference**, REU Hemimethylation Research	Houston, TX
2019	**Math Graduate Programs Expo**, REU Hemimethylation Research	Texas State U.
2019	**Statistics Undergraduate Research Poster Session**, REU Hemimethylation Research	Texas A&M U.
2019	**Summer Undergraduate Research Symposium**, REU Hemimethylation Research	Texas State U.

Technical Skills

Proficient, R, C++, Rmarkdown, Shiny, tidyverse

Intermediate, Python, LaTeX, Unix

Familiar, SAS

Highlighted Coursework

MATHEMATICS
- **MATH 606: Theory of Probability**
- **MATH 607: Real Variables I**
- **MATH 447: Principals of Analysis II** , honors
- **MATH 446: Principals of Analysis I** , honors
- **MATH 409: Intro to Real Analysis** , honors
- **MATH 423: Linear Algebra II**
- **MATH 323: Linear Algebra**

STATISTICS
- **STAT 642: Methods of Statistics**
- **STAT 611: Theory of Inference**
- **STAT 414: Mathematical Statistics**
- **STAT 436: Multivariate Analysis and Statistical Learning**

COMPUTER SCIENCE
- **CSCE 313: Computer Systems**
- **CSCE 312: Computer Organization**
- **CSCE 221: Data Structures and Algorithms**