

Curriculum Vitae

About

Email - akhilm@utexas.edu

Education

The University of Texas at Austin, Austin, TX (2020-Current)

Bachelor of Science in Public Health, Honors

Dean's Scholars Honors Program

Skills

Technical/Computer Skills: Python and R programming for statistical analysis, REDCap, OpenSpecimen

Research Activities

Urban Information Lab, School of Architecture, University of Texas at Austin - (April 2021 - Current)

Accepted Manuscripts -

1. **Mandalapu, A.** Jiao, J., Azimian, A. (2022). Exploring the Relationship between Air Pollution and COVID-19 Death Rate: A Case Study in Los Angeles County, California. *International Journal of Geospatial and Environmental Research*: Vol. 9: No. 1, Article 4. Available at: <https://dc.uwm.edu/ijger/vol9/iss1/4>
2. Jiao,J., Bhat, M.R., Azimian, A., **Mandalapu, A.**, Farahi, A. (2022). Housing Market Price Movements Under Tech Industry Expansion During COVID-19. *International Journal of Housing Markets and Analysis*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/IJHMA-02-2022-0022>
3. Seong, K., Jiao, J., & **Mandalapu, A.** (2022). Evaluating the Effects of Heat Vulnerability on Heat-Related Emergency Medical Service Incidents: Lessons from Austin, Texas.

Environment and Planning B: Urban Analytics and City Science, 0(0).
<https://doi.org/10.1177/23998083221129618>

Submitted Manuscripts

1. Seong, K., Jiao, J., & **Mandalapu, A.** (2022). Effects of Urban Environmental Factors on Heat-related Emergency Medical Services (EMS) Response Time. Submitted to Journal of Applied Geography.
2. Seong, K., Jiao, J., & **Mandalapu, A.** (2022). Hourly Lagged Effects of Heat Index on Heat-related Emergency Medical Service. Submitted to Environmental Research.

Presentation

1. Seong, K., Jiao, J., & **Mandalapu, A.** (2022). Effects of Urban Environmental Factors on Heat-related Emergency Medical Services (EMS) Response Time. Presented at Transportation Research Board 2023 Annual Conference

Independent Research Presentations:

1. **Mandalapu, A.** , Tamma, S., Bhavani, N. Kim, E., Robinson, L., Rubarth, C. (2023). Connecting with the Community: Understanding and Improving Community Health Worker Workflows. 2023 Innovations in Health Science Education Annual Conference.
2. Kovaric, K., Luk, J., Phelps, N., Wilkerson, M., Navales, J., **Mandalapu, A.**, Wilkerson, L. (2022). Can a Quality Improvement Curriculum Improve Community Health Outcomes?. Presented at 2022 Dell Med Educational Innovation, Research & Awards Symposium.
3. **Mandalapu, A.**, Calzadilla, S., and Mondesire, S. (2020). "Image Classification of High-Performance Liquid Chromatography Chromatograms with Neural Networks," 2020 *International Conference on Computational Science and Computational Intelligence (CSCI)*, pp. 1647-1652, doi: 10.1109/CSCI51800.2020.00303.
4. **Mandalapu, A.** Franke, M., Patchipalu, B., Ramontal, P., Mondesire, S. (2020). Analyzing Deep Learning Image Classification of High-Performance Liquid Chromatography Chromatograms with Metabolomics. Accepted to the FLAIRS-33 conference, conference cancelled due to the COVID-19 pandemic.

UT Freshman Research Initiative (FRI) Program – Bioactive Molecules Laboratory January 2021 - December 2021

- Conducted literature review to determine new avenues of drug repurposing for hydroxybupropion
- Developed new analogs for hydroxybupropion to increase the potency of hydroxybupropion
- Designed suitable synthesis reactions using the Reaxys database to create novel analogs of hydroxybupropion
- Conducted a literature review to determine what research has been done on repurposing a drug
- Learned and performed wet lab skills such as extractions, thin-layer chromatography, spectroscopy
- Analyzed H-NMR data using MestReNova and drew reaction schemes and TLC plates using ChemDraw

Department of Molecular and Cellular Biology, Baylor College of Medicine - (June 2018 - August 2018)

Accepted publications:

1. Ambati, C. R, Vantaku, V., Donepudi, S. R., Amara, C. Ravi, S. S., **Mandalapu, A.**, Perla, M., Putluri, V., Sreekumar, A., & Putluri, N. (2018). Measurement of methylated metabolites using liquid chromatography-mass spectrometry and its biological application. *Analytical methods*, 11, 49-57. doi: 10.1039/c8ay02168f

Acknowledgements

1. D. Etchevest, S. Calzadilla, L. Alvarez, and S. Mondesire, "Detecting Informed Traders in the Financial Markets," in the proceedings of the *International Conference on Data Science*, Las Vegas, Nevada, July 2021.

Work Experience

Undergraduate Course Assistant (August 2021 - December 2021, August 2022 - Current)

- Led two weekly meetings as a peer mentor for UGS 303: Originality in the Arts & Sciences
- Served as a resource and facilitator for a cohort of 5 first-year students

Undergraduate Course Assistant (August 2022 - Current)

- Served as a grader for PBH 358D: Health Systems and Health Policy
- Led office hours to answer student questions
- Graded coursework and coordinated assessments with instructor

Summer Research Intern, Department of Urology, Baylor College of Medicine (June 2022 - August 2022)

- Developed data flow diagram for clinical data across three database systems
- Developed new forms in the OpenSpecimen platform and protocols to ensure faster querying and data quality
- Searched study files and medical records to complete clinical trial queries

Summer Research Intern, Office of the Dean of Students, University of Texas at Austin (June 2021 - August 2021)

- Conducted several qualitative data analyses of peer institutions and the literature to determine trends and future steps to write two reports to inform new policy directions for the UT Outpost and Student Veteran Services
- Presented internship projects to supervisors and fellow interns

Community Service

Ascension Seton Hospital Volunteer (January 2022 - Current) (311 hours)

- Assisted staff in the Surgical ICU by restocking carts and attending to call lights
- Assisted in the front desk by providing patient wayfinding services
- Assisted physicians in the emergency department by placing pages and checking in on patients

Health Leadership Apprenticeship, Dell Medical School (July 2021 - Current)

- Collaborated with team members and community health workers to better understand needs of community health workers
- Shadowed Community Health Workers during COVID-19 vaccination drives and home visits
- Attended discussions regarding healthcare transformation
- Received REDCap and FindHelp training
- Proposed new workflows for community health workers

Garza High School Tutoring - (August 2020 - Current)

Dean's Scholars Student Association - (August 2020 - Current)

Robotics Volunteer Judge - (October 2021 - Current)

Campus Environmental Center - (October 2021 - Current)

Contact Tracing, Dell Medical School, *Volunteer Tracer* (August 2021 - February 2022) (171 hours)

- Contact traced for COVID-19 within the Austin community for 8 hrs/week over 10 weeks
- Provided recommendations and resources to close contacts of a case

Proactive Community Testing Student Ambassador - (February 2021 - April 2021)

Activities

Dean's Scholars Student Association - Event Planner and Website Designer (August 2020 - Current)

- Tutored Garza High School students in Physics and Chemistry for 1 hr/week over 25 weeks
- Led and organized Deanslympics and the Graduate Student Panel, a social and athletic event for UT students
- Led and organized Spring Peer Advising Event, an opportunity for students to gain a student-centered perspective on what classes to take

- Currently leading a redesign of the Dean’s Scholars website to better meet the needs of alumni, current and prospective students

Campus Environmental Center, Environmental Justice Collective - Content Creator Lead
(October 2021 - Current)

- Designed promotional material for Traditional Caretakers of the Land, a discussion series on indigenous environmental practices
- Designed promotional material for Red Alert, an initiative to raise awareness of period poverty, sustainable menstrual products and the stigma around menstruation
- Volunteered to garden at Wholesome Generation, a nature-therapy school for young children

VEX Robotics (August 2016 - Current) - Team Leader (May 2017 - June 2020), Notebook Team Lead (June 2020 - June 2021), Volunteer Judge and Mentor (June 2021 - Current)

- Head of documentation for a college level robotics team of 8 students
- Wrote over 150 progress reports by consulting engineers and programmers to effectively communicate team progress
- Won prestigious Design Award at the Regional Level and at the World Championship

Awards + Honors

Dean’s Scholars Honors Program

Research

Undergraduate Research Fellowship (2022) - \$1000

Academic Performance

Dr. Anson L. Clark Endowed Presidential Scholarship (\$2500) (2022)

Mary E. Gearing Human Ecology Council Scholarship (\$1000) (2022)

Distinguished College Scholar (2022)

College of Natural Sciences Second Year Excellence Award (2022)

University Honors (Fall 2020, Spring 2021, Fall 2021, Spring 2022)

Extracurriculars

VEX Robotics Design Award State Championship - VEXU (2021)

VEX Robotics Design Award International Championship - VEXU (2021)