

# BHOOMIKA VENKATESH

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## EDUCATION

**The University of Texas at Austin, Austin, TX**

December 2021

*Bachelor of Science and Arts in Biology with a minor in Business administration*

## MEDICAL EXPERIENCE

**Ascension Dell Seton hospital, Austin, TX**

Fall 2019-present

*Volunteer/ Nurse's assistant*

- Answered phone calls at the charge nurse's station and stocked up all the stations by the patient rooms with blankets, towels, saline, alcohol wipes, injections, gowns, gloves for the emergency carts in hallways as well
- Wheeled down patients to their car while walking around to make sure patient call lights were answered
- Helped the charge nurse with the night shift schedule and break down or create patient charts of those being discharged or newly admitted onto the floor
- Provided comfort and connecting with patients while walking them to the Emergency rooms until the physician arrived
- COVID-19 screener at the entrance of the hospital for physicians and visitors coming in for work every week

**Shadowing Pediatric surgeons**

Fall 2019

- Observed Dr. Meyers and Dr. Josephs at Strictly pediatrics surgery center in Austin
- Observed umbilical and right inguinal hernia repairs, a circumcision, an excision of left arm mass, and an RIH repair
- Got to scrub alongside the physicians and observe the procedures, as well as pre-operation and post-operation interactions with the patients and their parent

**Shadowing Neurologist**

January 2020

- Observed Dr. Pavasia at Neurology consultants of Dallas
- Experienced his daily routine when seeing patients with specific movement disorders such as Parkinson's disease, Dementia, and Alzheimer's disease

**Osier laboratory, Austin, TX**

January 2020- present

*Research Volunteer*

- Member of the new Spring 2020 cohort to consent patients and families at Dell Children's Medical Center in the Emergency department for our clinical trial studying Pediatric traumatic brain injuries as that is a very understudied field in medicine
- Screening weekly for potential patients in the E.R. and letting the consentor on shift know, requires communication and teamwork
- Help with literature reviews weekly and the data team to manage incoming data as well as grant writing
- Leader of the Cultural Competency in healthcare card project on the Inclusivity committee and collaborated with a student Nurse as well as other team members to create cultural competence cards on different cultural groups such as Sikhs and Jehovah's witnesses for consenters in the lab and other nurses to use at Dell medical center
- Collaborated with other committees in the lab and organized the upcoming Friends of Osier Black Lives Matter Fundraiser to support the African American Youth Harvest Foundation, with donations currently coming in up to \$1322.99

## COMMUNITY INVOLVEMENT

**Second Chance SPCA (A non-kill Pet Shelter), Plano, TX**

July 2016 – present

*Volunteer*

- Walked and played with dogs of all sizes, often staying longer than my shift to help around shelter

- Always had a cheerful smile and willingness to do more around the shelter like washing dog bowls, mopping, and sweeping shelter floors, or doing laundry for dogs

### **Education Project**

Nov 2020-January 2021

#### *Virtual Volunteer tutor*

- Communicated effectively with my student's parents to set up tutoring sessions and answer any questions over Google Hangouts every week
- Organized creative activities and lessons to help my student with History and English and learn to enjoy it with time
- Mentored my student and was open about being there for her through the pandemic since online learning is a challenge, she said she felt heard, and she was grateful she for me

### **Ladies, let's talk**

December 2020-present

#### *Virtual volunteer*

- Spent time with immigrant women over zoom and shared my own experiences while helping them learn English.
- Shared my culture and background with the women I got paired with and learned so much about their lives and struggles, allowed me to be empathetic and lend an ear.
- Helped many immigrant women feel less lonely and stayed committed to the organization's goals of ending social isolation of immigrant and refugee women.

### **ACADEMIC PROJECTS (Doctor - Patient Relationship course)**

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- Analyzed Medical Journals on various topics ranging from humanities to issues of equality, diversity, and social justice relevant in healthcare today and synthesized papers over the changing role of the physician in America

### **RELEVANT COURSEWORK**

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#### **Computational Biology and Bioinformatics, College of Natural Sciences, The University of Texas at Austin**

January 2021-Present

- Developed intermediate skill level in R markdown to create reports of datasets consisting of graphs and significant interpretations
- Understood the connection between exploratory data analysis, principal component analysis, hypothesis testing, testing for assumptions, MANOVA, ANOVA, PERMANOVA testing for linear and logistic regressions between variables in studies
- Performed data visualization, probability distribution functions, randomization tests, data wrangling, binary classification, and cross-validation on a variety of datasets
- Explored data manipulation, strings, and connections to Biopython with gene functions using Python functions through Jupyter Notebook and Github

### **RESEARCH EXPERIENCE**

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- Collected and extrapolated data from around campus in a Science Sprint event at UT in the research project "Assessing the population density of fox squirrels, *Sciurus Niger*, on UT's campus and the damage they do to campus trees" on September 29th, 2018
- Part of the Freshman research initiative Magnetic Matter stream during Spring 2019 and conducted research on the new materials synthesis via solid state reaction, performed magnetic resonance microscopy, and learned superconducting characterization of materials for materials synthesis alongside my peers. In the end, some of my peers and I presented our idea for future research using magnetic resonance microscopy to the head of the Physics department as well

- Conducted my own project while collaborating on another scientists' research using antibodies such as CD3 and anti-CD3 that had differing linker lengths (mine is 5 amino acids long - the original substrate sequence site is called A-176 and is 10 amino acids) that could be cut by the enzyme MMP14 and can affect the activation of T cells, which can help protect the body against cancerous cells at Aetio Biotherapy (May28th-August8th, 2019)

## CAMPUS INVOLVEMENT

### Alpha Epsilon Delta Pre-health, Pre-professional honors society

September 2018- present

#### Active member

- Volunteered at Race for a Cure, as an Usher at Formula One, Therapeutic horse ranch, and many more events
- Attended Health Professions Networking Event with all types of doctors from Dell Hospital to gain insight into a physician's daily challenges and routines.
- Part of the volunteer committee and helped plan bi-weekly Down Syndrome Association of Texas YMCA class session volunteer events and volunteering for Autism Advocacy day at the Capitol.
- Organized and ran volunteer events with other members such as Stop the hunger run in Austin.

### SEVA

February 2020 - present

#### Active member

- Philanthropic organization partnered with Akshaya Patra to help feed kids around Austin and around the world
- Teamed with Hope Austin and Backpack Friends to feed kids around underprivileged kids around Austin for a whole year.
- Helped raise the \$7,500 to help feed students in need by tabling around campus and advertising our fundraising efforts.

### Asha Pravas

January 2021-present

#### Co-President

- Student-led Philanthropic organization at UT that serves to raise awareness of acid attacks in India as well as fundraise for the survivor's surgeries/ treatments
- Fundraised a total of \$936.03 from our first major fundraiser as an organization for Atijeevan Foundation, a renowned NGO in India that funds surgeries/ treatments as well as workshops on skin donation awareness and more for survivors there.
- Meetings every month with guest speakers such as acid attack survivors themselves, engagement with members on important topics such as women's rights issues surrounding acid attack around the world and skin donation, provide a safe space to discuss mental health and destigmatize topics surrounding it with our members and socials for our members to meet new people

## LEADERSHIP/ WORK EXPERIENCE

### Whataburger, Austin, TX

January 2019- April 2019

#### Team member

- Served customers food at the front line by greeting them with a smile every time and taking orders.
- Communicated effectively with other members such the cook and managers for supplies or food orders.
- Provided excellent customer satisfaction with all types of customers and showed empathy.

### Aetio Biotherapy, Dallas, TX

May 28,2019-August 8, 2019

#### Financial and research operations intern

- Paid internship for 8 hours every day, Mondays through Fridays during the summer of 2019
- Worked with the financial team to reorganize lab equipment quotes, invoices, and inventory for Aetio in the HubDoc invoice system as well as in excel
- Performed research on a project involved with immunotherapy to create an effective drug that could potentially be patented and used with chemotherapy when trying to cure cancer

- Observed scientists at work and practiced lab techniques such as PCR, Miniprep, Transformation of bacteria, Inoculation of bacteria, making LB agar plates, and more
- Conducted my own project while collaborating on another scientists' research using antibodies such as CD3 and anti-CD3 that had differing linker lengths (mine is 5 amino acids long - the original substrate sequence site is called A-176 and is 10 amino acids) that could be cut by the enzyme MMP14 and can affect the activation of T cells, which can help protect the body against cancerous cells

#### **UTalk call center, Austin, TX**

September 2019-December 2019

##### *Team member*

- Contacted UT Alumni and parents of students who previously attended UT or currently do to ask for pledges to help crucial student programs and services such as student emergency services, UT longhorn student pantry on campus, counselling, and mental health services center on campus, and many more departments within College of Natural Sciences and such that could use donations to improve the programs
- Our team helped raise \$725,141.36 together so far for this fiscal year and this was more than half the goal for the entire fiscal year

#### **University Housing and Dining, Austin, TX**

January 2020 – May 2020

##### *Student manager*

- Ensured efficient operation of the dining hall by checking with others and proactively offering help where needed
- Taking on a variety of positions such as the cashier at the front of the dining hall, greeting and admitting students into the dining hall to serving food to students at different stations
- Closing the dining hall at night and making sure everyone is staying motivated and asking for help when needed
- Listening to any concerns from other coworkers and ensuring student satisfaction as well as the safety of all the meals

#### **Health Professions Office at UT Austin, Austin, TX**

June 2020 – present

##### *Peer coach*

- Providing guidance for students of all grades at UT Austin interested in pursuing a career in the healthcare field
- Guiding students includes helping students with shadowing, volunteering, application resources, pre-requisites, gap year for all sorts of pre-health pathways ranging from Pre-medical to Pre-Optometry
- Collaborating with other peer coaches to design presentations for Freshman students interested in pursuing a track in the healthcare field as well as creating visually appealing modules for the Health Professions Office to distribute to students as helpful resources
- Soon to help lead the annual Health Professions fair at UT and workshops as the school year progresses

#### **HONORS AND AWARDS (Summer 2017)**

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- 1<sup>st</sup> place State winner in Medical Law and Ethics through HOSA (Health Occupations Students of America)
- 8<sup>th</sup> place Nationals winner in Medical Law and Ethics through HOSA

#### **Important skills and talents**

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- Quick learner, proactive, organized, committed, great communicator and proficient in excel and Microsoft