

# Payal Amin

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## EDUCATION

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### The University of Texas at Austin

August 2018 - May 2022

*Bachelor of Science and Arts in Biology Candidate*

*Bachelor of Art in Health & Society Candidate*

*Ethics & Leadership in Healthcare Certificate Candidate*

GPA: 3.8407

Member of Women in Natural Sciences

## EXPERIENCE

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### Virtual Volunteer at Saratoga Pediatric Subacute Rehabilitation Facility

February 2021 - Present

- Hosting zoom calls with non-verbal pediatric patients who have respiratory and cognitive disabilities.
- Creating engaging activities for patients to enjoy such as auditory and visual stimulation through reading books, playing games, arts & crafts, watching videos, singing, etc

### Contact Tracing Volunteer at UT Health Austin at Dell Medical School

June 2020 - August 2020

- Informing COVID-19 patients in underserved populations and of their COVID-19 positive results, providing public health guidelines, obtaining potential contacts of infection, and connecting patients to community resources for isolation needs.
- Calling contacts of COVID-positive patients to inform them of their potential exposure, explaining public health safety guidelines, providing testing resources, and helping them obtain community support resources needed for quarantine and isolation periods.

### Volunteer at St. David's Medical Center

January 2020 - Present

- Volunteering in the hospital Gift Shop and Surgery Floor Waiting Room.
- Providing resources and refreshments to hospital staff and family members.

### Volunteer for Mental Health Peer Educator Program at the University of Texas at Austin

August 2019 - Present

- Presenting workshops promoting mental health interventions to students on campus.
- Planning mental health promotion events on a campus-wide scale.
- Designing social media campaigns to inform college students about mental health and increase the accessibility of treatment through the *UT Healthy Horns* Instagram account.

### Events & Outreach Program Assistant for Women in Natural Sciences at UT Austin

August 2019 - Present

- Working in the Fundraising & Alumni Office at UT Austin for WINS-related events.
- Networking with community organizations and increasing the reach of WINS in the Austin community.
- Planning seminars and volunteer events for the members of WINS.
- Volunteering as a mentor for freshman WINS students to provide advice and ease their transition into college.

## PROJECTS

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### Project SEED

May 2019 - December 2019

*Research Assistant*

- A study focusing on the developmental effects on children who translate for their English-limited parents
- Analysis of hair and saliva samples collected from subjects
- Processing of data collected from subject interviews and meetings
- Experience with data processing systems such as REDCap

## **Freshman Research Initiative: BioBricks Stream at the University of Texas at Austin**

January 2019 - Present

### *Researcher*

- Purple Protein Project: Inserting Meffcp\_GBR22 protein gene into pET22b vector to be expressed and purified using Ni-NTA affinity chromatography; determination of purity through SDS-PAGE and identifying protein identity with Western blot using HRP conjugated body
- CDX2 Project: Separating CDX2 functions of ATM Kinase inhibition and transcription through the insertion of the mutant E241V into transformed BL21 (DE3) Condon Plus E. Coli cells expressed with IPTG induction and confirmed through SDS-PAGE; protein quantification using serial BSA dilutions, followed by DNA binding assays to confirm protein functionality
- Serving as a Research Mentor for freshmen and sophomore researchers as well as a mentor for TIPS students in the Freshman Research Initiative.
- Poster Presentation: "Biobricks for Molecular Machines - Purple Protein Project: Expression and purification of the Purple Protein", *Spring Undergraduate Research Forum at the University of Texas at Austin*, April 2019.
- Awards: Best Freshman Research Initiative Poster Award for the "Biobricks for Molecular Machines - Purple Protein Project: Expression and purification of the Purple Protein" presentation, *Spring Undergraduate Research Forum at the University of Texas at Austin*, April 2019.

## **APX Project: Read Aloud**

January 2019 - May 2019

### *Research Tester*

- Reading scientific children's books to preschoolers to test the effects of STEM exposure in various socio-economic environments.

## **ACTIVITIES & LEADERSHIP**

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## **S.M.I.L.E. at the University of Texas at Austin**

August 2018 - Present

### *Vice President, Treasurer*

- Overseeing community initiatives for disadvantaged children in the Austin area.
- Planning and hosting the annual "Brave the Shave" event, where community members shave their heads in solidarity with children who have cancer and to raise money for the St. Baldrick's Foundation.
- Volunteering weekly in the children's psychiatric ward at the Austin State Hospital and hosting engaging activities while encouraging emotional stimulation among the patients.

## **American Medical Student Association at the University of Texas at Austin**

August 2018 - May 2020

### *Member*

- Involvement in healthcare-based volunteer events to prepare for professions in the medical field.
- Events include raising money for the People's Community Clinic, volunteering with the Capital Area Parkinson's Society, learning emergency life-saving skills, and more.

## **SKILLS**

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**Technical /Computer Skills:** Advanced experience with G Suite, Microsoft Office Suite, REDCap, R Statistical Software, Python Programming Language

**Research Skills:** Polymerase Chain Reaction (PCR), DNA cloning (site-directed mutagenesis), Agarose Gel electrophoresis, Sodium Dodecyl Sulfate-Polyacrylamide Gel Electrophoresis (SDS-PAGE), Transformation, Plasmid DNA purification (Miniprep), spectrophotometry, recombinant protein expression in E.coli, recombinant protein purification (Nickel-NTA, MBP-tag affinity chromatography), Western Blot, protein quantification, and DNA Binding Assays

**Additional Languages:** Fluent in Gujarati and Hindi (reading, writing, speaking), intermediate Spanish