

# ANISH ZUTE

Physics and Radio-TV-Film Student

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## Objective

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Accomplished and eager-to-learn undergraduate student with a strong basis in emerging technologies, such as 3D visualization, looking to apply my unique combination of technical and creative knowledge to a career in research, design, or engineering.

## Skills

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### Programming

JAVA, Python, C#  
MATLAB, LaTeX, Mathematica  
Arduino, ARM mbed, BASIC  
Novice HTML, SQL, C++

### Coursework

Waves and Optics  
Quantum Physics I, II, III  
Classical Dynamics, Electrodynamics  
Thermodynamics, Fluid Mechanics

### Engineering/3D Software

3DS Max, Maya, Unity3D  
Eagle, CAD, LabView, ANSYS  
Vicon Blade, Boujou

### Creative

Video Editing (Premiere, AVID, Final Cut)  
VFX and Motion Graphics (AfterFX, Nuke)  
DSLR Photography (Photoshop, Lightroom)  
Cinematography/DP/Colorist (DaVinci)  
Motion Capture/Virtual Reality

### Areas of Interest

Physics/Aerospace Engineering  
3D Visualization/Simulation  
Spacecraft Design

### Miscellaneous

Fluent in Marathi  
Proficient in German, Basic Hindi  
Adept Pianist, Guitarist, Violist, Drummer  
Practiced at Audio Engineering/Mixing  
Woodworking/Machine Shop/Assembly

## Accomplishments

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- National Merit Commended Scholar
- CollegeBoard AP Scholar with Honor
- 35+ Hours towards Private Pilot's License
- American Sailing Association Certified
- UT Department of Mechanical Engineering Machine Shop Certification
- Integral lead in the foundation of multiple LLC companies.
- Video work featured on VEVO, MTV, VH1
- **Captain** of the University of Texas Sailing Team (Spring 2017)
- **Media/Public Relations Officer** for the University of Texas Sailing Team (Spring 2015)
- **Social/Recruitment Officer** for the University of Texas Sailing Team (Fall 2016)
- **Founding Officer and VP of Administration** for UT Programmers in Science and Engineering Club (PSE) (Fall/Spring 2016/17)

## Work Experience

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### ELECTRONICS CHIEF ENGINEER – Texas Guadalupe | UT Hyperloop Engineering – Austin, TX – August 2017 – Present

- Design lead on every non-mechanical facet of a hyperloop pod for SpaceX Competition III, including the propulsion, controls, sensors, power, and programming subsystems.
- Liaising on a systems level with the Mechanical Chief Engineer, as well as facilitating systems discussions within electronic subsystems.
- Managing staffing and task delegation for the electronics team and relevant subsystems, including upwards of 20 personnel.
- Networking personally on behalf of Hyperloop with tech industry sponsors such as ANSYS, Firefly Space Systems, and others.

### MISSION OPERATIONS DEVELOPMENT INTERN – NASA Jet Propulsion Laboratory – Pasadena, CA – June 2017 – August 2017

- Planning and Execution Software Systems – Mission Systems and Operations intern under Dan Allard through the Caltech SFP/SURF.
- Developed a multimission Unity tool to aid spacecraft operators in visualizing spacecraft attitude, local mesh, and relay overflights, including visualization of relay occlusion due to surface terrain and deck. Planned implementation on Mars 2020, MSL, and InSight.
- Designed physics-based 3D visualizations of the current Mars Relay Network between Earth, Martian orbiters, and Martian landers working with the Mars Relay Operations Service (MaROS) and Deep Space Network teams. Compiled into an onboarding video.

### POWER AND SYSTEMS ENGINEER – 512 Hyperloop – Austin, TX – September 2016 – August 2017

- **Project Lead** on the development of the pod stabilization power and control systems and the emergency braking control system.
- Coordinated as systems engineer liaison between the power and suspension teams to ensure proper integration of systems.
- Tested at SpaceX Competition II in August 2017 in Hawthorne, CA as one of only 0.36% of teams accepted into the final round.

## **UNDERGRADUATE TEACHING ASSISTANT – UT Physics Department, Dr. Greg Sitz – Austin, TX – January 2017 – May 2017**

- Served as an Undergraduate Teaching Assistant for Dr. Sitz's PHY353L Modern Physics Lab upper-division senior course as a junior.
- Tasked with mentoring students on the recreation of many renowned and iconic physical discoveries of the 20<sup>th</sup> century.
- Additionally, given free rein to conduct my own scientific inquiries through experimentation in the lab.

## **UNDERGRADUATE LABORATORY RESEARCH – UT Physics Department, Dr. Greg Sitz – Austin, TX – June 2016 – Sept. 2016**

- Designed an experiment with my laboratory partner to measure the decay parameters of para- and orthopositronium antimatter.
- Conducted the experiment successfully and accurately measured the decay of positronium in 1 atmospheric pressure of air.
- Documented a laboratory manual to inform future students in conducting the experiment as a gateway to quantum electrodynamics.

## **TECHNICAL/CREATIVE CONSULTANT – Billafam United, LLC – Miami, FL – August 2011 – January 2016**

- Integrally mentored during the foundation and licensing of the company.
- Collaborated closely with the CEO to plan, produce, and publish all of the company's creative media outputs
- Streamlined with the financial manager to provide the best equipment, purchases, and amenities given the operating budget.

## **FOUNDER/CEO – AZ Cinematics – Houston/Austin, TX – 2011 – Present**

- Founded the multifaceted digital media entertainment company AZ Cinematics as a freshman in high school.
- Provided advanced video production, photography, graphic design, web design, and audio production to a wide variety of clients.
- Work has been featured on VEVO, MTV, and VH1 channels on numerous occasions.
- Clients include: ASAP Ferg (Sony Music Entertainment), Alanz Inc., Billafam United, Travis Scott.

## **STUDIO AND EQUIPMENT MANAGER – Texas Student Television – Austin, TX – June 2015 – December 2015**

- Managed and maintained the operation of the professional live video studio and control room at an FCC licensed television station.
- Coordinated equipment rentals for the productions division of TSTV.
- Led the training new employees on proper equipment handling, including video editing, live studio operations, tricast, sound mixing, and advanced camera operation.
- Oversaw the renovation of the entire live studio and control room and helped install and catalogue new equipment.

## **STUDENT TECHNICIAN – RTF Equipment Checkout – Austin, TX – August 2015 – December 2015**

- Catalogued and maintained the equipment checkout facility at the University of Texas RTF department.
- Inspected and maintained professional equipment including ARRI and Bolex cameras, ZEISS PL lenses, and ARRI lightings kits.
- Assisted students with equipment checkout and returns.
- Utilized an advanced database software (USHER) to manage the creation, coordination, distribution, and return of equipment orders.

## **CHIEF LIGHTING TECHNICIAN/GAFFER – Longhorn Latenight – Austin, TX – August 2014 – December 2015**

- Managed lighting and colour for the FCC-licensed live television show Longhorn Latenight at Texas Student Television.
- Provided technical assistance in all aspects of the live production, including camera management and tricast broadcast systems.
- In charge of training new employees on proper equipment handling, including video editing, live studio operations, tricast, sound mixing, and advanced camera operation for the show.

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## **Education**

### **B.S. IN PHYSICS: SPACE SCIENCE – The University of Texas at Austin – Austin, TX – Expected Graduation: Spring 2018**

- Specialization: Aerospace Engineering
- Areas of Interest: Quantum Mechanics, Thermodynamics, Spacecraft Design, Orbital Dynamics

### **B.S. IN RADIO-TELEVISION-FILM – The University of Texas at Austin – Austin, TX – Expected Graduation: Spring 2018**

- Specialization: Advanced Visual Effects, 3D Simulation, Modeling and Animation
- Areas of Interest: Motion Capture, 3D Simulations, 3D Modeling, Virtual Reality