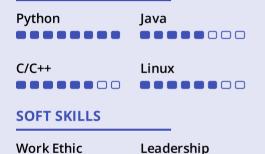


### Nikhil Kalidasu

Data Scientist

- Austin, TX, USA
- nik875.github.io

#### **TECHNICAL SKILLS**



# Scientific Writing

## Communication

#### **PROJECTS**

## Independent Research (2022 - Present)

Trained a Transformer-based neural network to represent DNA sequences as numerical vectors.

https://nik875.github.io/projects/senior-research.html

### Smartshell (2023-Present)

Created a "smart" command line shell tightly integrated with ChatGPT.

https://nik875.github.io/2023/03/1 6/language-models.html

#### PDF Background Music (2023-Present)

Making a PDF reader that generates appropriate background music depending on what's on screen.

#### **INTERESTS**

Contributing to Open Source Repurposing Old Electronics

Hopping Linux Distributions

Hiking and Rock Climbing Polymathic Data Scientist with experience ranging from aerospace to microbiology to NLP. Seeking experience with real-world research and problem solving in aerospace, computational biology, and systems engineering.

#### **WORK EXPERIENCE**

#### **Texas Rocket Engineering Lab**

(2022 - Present)

Systems Integration Lead

- Working to launch the first university-developed liquid-fuel bipropellant rocket capable of reaching space.
- Performed a full independent flight software audit to bring knowledge of software systems into an engineering-focused team.
- Coordinating a migration from locally-hosted Gitea to GitHub Enterprise.

**Key Achievement:** Worked with engineers of diverse backgrounds to design an adequate system of roll control after actuated fins were cut from the project.

https://www.texasrocketlab.com/

## Engineering and Computational Learning of Al in Robotics (ECLAIR)

(2023 -Present)

Project Lead

- Developing a PDF reader that generates music based on what's being read.
- Developed a Transformer-based mood tag generator for music lyrics.
- **Key Achievement:** Led a less experienced team, taught necessary Al and Python skills to get the projects done on time.
- https://eclairrobotics.web.app/

### TJ Space

**Program Lead** 

(2018 - 2022)

Worked four years on TJ REVERB, a 2U cube satellite built without using a satellite kit, designed for lanuch into Low-Earth Orbit.

Personally wrote over 60% of satellite software and carried out code reviews.

**Key Achievement**: Programmed, assembled, tested, and launched TJ REVERB to orbit, completing a project that had been delayed for years.

activities.tjhsst.edu/cubesat

#### **EDUCATION**

# University of Texas at Austin

BS, Computer Science

(2022 -Present) Thomas Jefferson High School for Science and Technology

(2018 -2022)

Advanced Diploma

**PUBLICATIONS** 

#### TJREVERB: A High School CubeSat Story

(2023)

2023 IEEE AeroConf

An in-depth review of the problems we faced building a CubeSat in high school, and how we addressed them.

https://ieeexplore.ieee.org/document/10115543

 $Identifying\ and\ Overcoming\ Challenges\ in\ High\ School\ Cube Sat\ Programs \ \ \ (2022)$ 

Small Satellite Conference

Recommendations for CubeSat program organization from interviews of 6 High School CubeSat programs in America and our personal experiences at TJ Space Program.

https://smallsat.org/