Nikhil Kalidasu

Data Scientist

Austin, TX, USA

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nik875.github.io

TECHNICAL SKILLS

Python ■■■■■■■

Java ■■■■□□□

C/C++ ■■■■■□□

Linux ■■■■■□□

SOFT SKILLS

Work Ethic ■■■■■■□

Leadership ■■■■■■□

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

PDF Background Music (2023-Present)
Making a PDF reader that generates appropriate background music depending on what's on screen.

Mood Analysis of Song Lyrics (2023)
Used NLP to predict the moods of songs based solely on their lyrics.

https://nik875.github.io/2023/03/16/language-models.html

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 AI 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 AI and Python skills to get the projects done on time.

https://eclairrobotics.web.app/

TJ Space (2018 - 2022)
Program Lead

- 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 (2022 - Present)
BS, Computer Science

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 CubeSat 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/