

ABHIJIT DEO



Highly motivated Python developer with expertise in AI and Machine Learning

EDUCATION

- Birla Institute Of Technology and Science, Goa** 2019-2023
B.E Electronics and Instrumentation
Graduated with cumulative Grade of 7.5 out of 10
Was very much active in the college's AI society and its events as a member
- Pace Junior Science College, Dadar, Mumbai** 2017-2019
Higher Secondary Certification
85% in Board Examination and 8057 All India Rank in JEE ADVANCED
- Rajapur HighSchool, Rajapur** 2014-2017
Secondary School Certification
Achieved 1st rank throughout school, demonstrating consistent academic excellence and passed with 97.40%
Won multiple oratory competitions and science quiz events, highlighting strengths in public speaking, analytical thinking, and team collaboration.

EXPERIENCE

- Minus Zero** March 2024 - Current
SDE+MLE
- Led the 0-to-1 development of a high-performance Python-based inference library for proprietary end-to-end autonomous driving models, enabling real-time deployment on autonomous vehicles.
 - Designed and implemented data processing pipeline to transform raw sensor data into structured and trainable datasets.
- AIRA Matrix** July 2023 - March 2024
AI Engineer
- Developed and implemented Image Classification and Segmentation models for Prostate Cancer detection and used Multiple MIL strategies to train classification models for histopathology images.
 - Engineered optimized multi-threaded code for Tiling and Inference, reducing processing time by 70%. On the Inference side, experimented with torch compile and ONNX to speed up the inference.
 - Collaborated with the Data Science team to enhance survival prediction models for cancer patients.
- SAMSUNG Research Institute, Bangalore** July 2022 - Dec 2022
Research Intern
- This was part of PS-2 program at BITS
 - Working on Multi-Intent Classification with the Voice Intelligence team.
 - Architected a comprehensive pipeline for data cleaning, processing, training, and model evaluation suitable to Bixby system.
- Government Of Goa** June 2021-Aug 2021
Data Science Intern, Remote
- This was part of PS-1 program at BITS.
 - Conducted in-depth Exploratory Data Analysis of Agricultural datasets to identify key trends and insights

RESEARCH

- Bayesian Deep Learning** Jan 2022 - May 2022
Study Oriented Project [Code](#)

- Worked on Bayesian Graph Neural Networks and Generative tasks as an undergrad researcher at APPCAIR
- Researched and implemented Bayesian Graph Neural Networks for Generative tasks, contributing to ongoing advancements in the field

PROJECTS AND OPEN SOURCE CONTRIBUTION

Google Summer of Code at INCF

June 2023- Sept 2023

Contributor

[gist](#)

- Selected as a contributor for INCF's GSOC23 program, contributing to The Virtual Brain (TVB) project.
- Developed an efficient mechanism to download, cache, unzip, and load various neuroscience datasets from Zenodo, optimizing data accessibility for researchers.

TorchVision

Jan 2022-Jan 2023

Contributor

[Contributions](#)

- Enhanced PyTorch's Computer Vision library by integrating the Stanford Cars Dataset with its DataLoader V2 prototype
- Added Complete IOU loss function, and vectorized BoxEncoding and Boxdecoding of FCOS models and much more. For more details, please click on contributions.

Vformer

Oct 2021-Present

Lead Contributor

[Code](#)

- Contains implementations of prominent ViT architectures broken down into modular components.
- Led the implementation of Vision Transformer Models, including Swin Transformer and Pyramid Vision Transformer etc, for the Vformer library
- Library package has more than 5k downloads and 150+ stars on Github

TECHNICAL SKILLS

Programming Languages	Python, C/C++, Matlab
Frameworks	PyTorch, NumPy, Pandas, ONNX, TensorRT
Tools and Platforms	Git/GitHub, Docker, GCP, NVidia-Jetson

OTHER ACTIVITIES

Member

Society for Artificial Intelligence and Deep Learning

- Involved in reading and discussion sessions on artificial intelligence research.
- Part of the organizing committee for the AI Symposium 2022
- Conducted a course on Introductory on Python and Machine Learning for freshers in collaboration with the Centre for Technical Education (CTE) at Bits.

RELEVANT COURSE-WORK

University	Digital Image Processing, Natural Language Processing, Optimization, Reading Course on Generative Adversarial Networks (GANs), Object-Oriented Programming, Meta Learning ¹
Online	GANs Specialization (Coursera), TensorFlow Developer Certification (Udemy)

¹Auditing