ABHIJIT DEO

Highly motivated Python developer with good 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 *April 2024 - Current*
SDE+MLE

· Collaborating with the SDE and MLE teams to develop and optimize Data Pipelines and model inference.

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, Banglore *July 2022 - Current*
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, Keras, TensorFlow, Pandas
Tools and Platforms	Git/GitHub, Docker, GCP

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)

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[1]Auditing