32A KP-7
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Gyanig Kumar

Final year Undergraduate, Computer Science

Education

Kalinga Institute of Industrial Technology, Odisha, India
*Bachelor of Technology*Computer Science and Systems Engineering — *Jul' 19 - Jul'23*
CGPA: 9.03/10 (Currently 7th Sem)

DAV Chandrasekharpur, Odisha, India
Higher Secondary Education, Science and Engineering — *Jul' 17 - Jul' 29*
Percentage: 86%

Experience & Volunteering

Indian Institute of Science, Bengaluru *(Research Intern)* — *April' 22 - Present*
(Computer Vision & Human Computer Interactions)
- Working at Intelligent Inclusive Interaction Design (I3D) Lab, CPDM under the guidance of Prof. Pradipta Biswas
- Working in improving assistive HCI like Appearance-Based Gaze Estimation using Image Processing, Deep Learning models and Evaluation Studies

Amygdala-AI *(Research Apprentice)* — *May' 22 - Present*
(Computer Vision & Speech Learning)
- Improving Audio-Visual Correspondence Tasks and Speech Recognition in Wild

Konnexions Society, KIIT *(Teaching Assitant)* — *Nov' 21 - April' 22*
- Teaching Instructor for Data Science & Machine Learning
Appreciation Letter

Design Thinking Labs, KIIT *(Student Member)* — *Jul' 19 - Jan' 20*
- Case Study on Posture Improving Wearable based on CAD & IoT perspective

Awards & Achievements

Official Twitch Affliated Streammer under Science & Technology — *2020*
Participated in Water Rover Competition **IIT BOMBAY Techfest** — *2019*
Awarded **3rd Position** in **C.S.I.R. Innovation Awards** — *2018*
Awarded **Best in Smart Mobility Project** in **Atal Marathon**, AIM, GOI — *2017*

Research Interests

Working : Computer Vision, Speech Recognition, Depth Estimation, Domain Adaptation, Self-Supervised Learning, Transformers+Attention Networks

In-Depth : Gaze Estimation, Landmark Detection, Few-shot Learning, Feature Extraction

Academic Projects

Chat rooms with multilingual conversation support
Supervisor : Prof. Bindu Agarwalla — *Feb'22 - April'22*
- Novel introduction of translating any incoming messages on a chat platform
- Simple Web server application using Express.js & Socket.io for creating Bi-directional messaging passing with simple query handling process
- Google Translate API provides faster translation and dynamic language support
- Heroku — Github

Course Projects

Classification on Zomato Ratings using Decision Trees
Course : Machine Learning — *Mar '22 - Apr '22*

- Implemented *ID3, CART, C4.5* Decision Tree algorithms & avoided overfitting with pruning and pre-pruning
- The zomato dataset required *Discretization, Feature-Scaling, Pre-Processing, Tokenization* & multiple Root Attribute Selection
- For Max-Depth in range 30-35, highest accuracy of 79% was achieved
- Github

Lox : Interpreter for Python-like language
Course : Compilers Design & Object Oriented Program — *Sept '20 - Dec '20*

- Built an end-to-end interpreter that takes Python-like syntax
- Implemented Features such as *parsing*, *control flow*, *hashes*, *garbage collection*, *superclasses* etc.
- Github

Personal Projects

Kaggle Participations
Course : Machine Learning & Deep Learning — *Online*

- Participated in Research Code Competition *PetFinder.my - Pawpularity Contest* implementing *transfer-learning* and ensemble models like *BiT ,ViT, EffNetB2-B5* on a diverse dataset of image and tabular data, achieved 18.05839(Our) vs 16.82256(Winner) RMSE
- Ranked 1963/3537
  - Github — Kaggle

Skin-Lesion ISIC Challenge using recent benchmark models of Medical Image Segmentation
Course : DeepLearning in Medical Data — *Sept '20 - Feb '21*

- Worked on ISIC 2020 Challenge dataset, with different UNet models with modified architectures
- Used recent trends of Image Augmentation like *MixUp & CutMix* to improve pipeline
- K-Fold learning was implemented to produce best set of results as well
- Focus on *Transformer Net Ensemble with UNet* gave best results with 78% Val. Accuracy

Certifications

TensorFlow DeepLearning Specilization, *DeepLearning.ai* — *Jan '22*
5th Summer School on AI,*CVIT, IIIT Hyderabad* — *Sept '21*
Machine Learning, *Stanford* — *July '20*
Discrete Math and Analyzing Social Graphs, *HSE* — *July '20*
Calculus and Optimization for Machine Learning, *HSE* — *June '20*
Introduction to Programming, *CS50* — *Sept '19*

Extra Courses

Deep Multi-Task and Meta Learning, *Stanford CS330* — *Dec'21*
Digital Image Processing, *NPTEL & Books* — *April '22*
Graph Neural Networks, *Youtube-DeepFindr,ML Tech Talks* — *June '22*

Computer Skills

Languages: C, C++, Python, CSharp, Bash, LaTeX
Frameworks: TensorFlow2, Pytorch, Tensorflow.js, SciKit-Learn
Libraries: Numpy, Pandas, Matplotlib, Keras, Librosa, Kivy
Extras: MATLAB, R.O.S. , OpenCV, Fusion 360, Unity-3D