Nikhil Kumar

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EDUCATION

Year	Degree/ Examination	Institution	CGPA/Percentage
2024	B.E, Information Science & Engineering	Bangalore Institute of Technology, Bengaluru	8.74 *(current)-Top 10%*
2020	12th	C.R. Oasis Convent Sr. Sec. School, New Delhi	78.6
2018	10th	De Nobili School, Sijua, Dhanbad	93.4 *Rank 4/120*

PROJECTS & EXPERIENCES

Disease Identification on Tomato Plant
- Exploring the deep learning based classification for timely and effectively detecting diseases in tomato plants, ensuring food security and reduced economic loss
- Designed a lightweight model trained via transfer learning from a patch based decoder through PyTorch Lightning framework for a faster production and generating relevant metrics for farmers

Benchmarking Transformer Based Models on Semantic Segmentation Tasks
- Developing benchmark to evaluate existing SOTA encoder-decoder model on Flood data, to design a better framework for early disaster prediction system
- Designing a pipeline to get the upsampled masked data by annotating non aquatic objects via ResNet backbone, doing feature modulation and passing through decoder network for probability mapping

Automating Product Categorizing for AbitiKart (e-commerce company)
- Developed product classification for women ethnic wear by employing computer vision techniques, which was implemented by an e-commerce site, resulting in faster product listing on Shopify and enhanced UX
- Established data configuration and baseline for annotation of bulk images to be iteratively fed into the model

Entrepreneurial Experience | TAKSHA   Nov 2020 - Mar 2021
- Launched a project, catering to students from tier 3 cities through faculties from esteemed varsities like IITs, NITs, BITS, etc.
    - Contacted local schools and stakeholders to start a co-learning space for students in 3 centres
    - Compiled and analysed data of K-10 segment in tier-3 cities for calculating the sustainability

RESEARCH PAPER: Network Security Analysis using Big Data & Improved Neural Network *(Accepted)*

SKILLS

Languages: Python, Java, C
Frameworks: PyTorch, Tensorflow*, HuggingFace Transformers , PyTorch Lighting, etc.
ML Workflow: Web Scraping (BeautifulSoup, Requests), Data Viz. (Seaborn, Matplotlib), Data Processing (Pandas, Numpy, Scipy), Model Building (Scikit-Learn)
Others: Version Control (Git), Shell Scripting (Bash), SQL
OS: Windows, Mac, Linux

Additional Courses: Convolutional Neural Networks (DeepLearning.AI) , Advanced Linear Algebra, Data Mining & Warehousing

OTHER EXPERIENCES

CP Expert | OSCODE   Oct 2021 - April 2022
- Tested and Verified correctness of over 100 programming problems included in competitive programming contests in college
- Designed exhaustive set of test cases to evaluate solutions submitted by over 150-200 candidates for each problem

Teaching Assistant | Microcontroller Laboratory   May 2022 - July 2022
- Prepared lessons according to course outline to convey required material and deepen student understanding of subject matter
    - Taught small groups of students focused on specific parts of coursework
    - Graded assignments, proctored tests according to processes outlined by professor, department and university

Open Source Contributor | GSSOC   Mar 2022 - May 2022
- Selected in GSSOC, a 3-month program conducted by Girl Script with focus on Open Source
    - Applied knowledge of git and bash commands through contribution to various repositories

ACCOMPLISHMENTS: HackerRank: 5⭐ in Problem Solving, 5⭐ Python