Dhruv Kamalesh Kumar

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AI graduate seeking Spring/Summer 2024 co-op in machine learning, data science, and related fields. Proficient in ML, DL, Computer Vision, Natural Language Processing, and Python, dedicated to applying AI to real-world challenges

EDUCATION

Northeastern University, Boston, MA **Expected December 2024**
Khoury College of Computer Sciences - MS in Artificial Intelligence (GPA - 4.0)
- Key Coursework: Pattern Recognition and Computer Vision, Algorithms, Artificial Intelligence, Programming Design Paradigm, Linear Algebra and Probability, Human-Computer Interaction

Acharya Institute of Technology, India **July 2022**
Bachelor of Engineering in Computer Science

SKILLS

- **Languages**: C, C++, Java, Python, Dart, SQL
- **Tools**: PyTorch, Tensorflow, Keras, SkLearn, OpenCV, SpaCy, NumPy, Pandas, NLTK, Flutter, Git, REST API
- **Knowledge Areas**: Machine Learning, Data Analysis, Statistics, Computer Vision, NLP, Deep Learning
- **Databases**: MySQL, MongoDB, Firebase

EXPERIENCE

WeSource Company, India **May 2021 - September 2022**
Machine Learning Intern (Computer Vision, Machine Learning, Flutter)
- Created a robust fraud detection system, achieving an 87.34% accuracy rate and saving the company $20,000
- Redesigned and developed two cross-platform mobile apps, resulting in a 35% boost in sales
- Enhanced functionality through innovative app design, resulting in a 20% increase in user engagement

Acharya Institutes, India **September 2021 - August 2022**
Software Engineering Intern (Flutter)
- Revamped the app's architecture and UI, resulting in a daily user base surge of up to 15,000
- Guided interns, boosting team productivity by 20% and ensuring timely project deliveries
- Managed concurrent bug fixes, requirements, and deployments in Agile, reducing reported bugs by 30% and expediting development

SM Creatives, India **January 2022 - May 2022**
Software Engineering Intern (Flutter)
- Spearheaded development and deployment of five distinct cross-platform applications across multiple clients
- Enhanced a kids' educational app, driving a 20% increase in engagement among toddlers and preschoolers
- Improved application efficiency by 25% through advanced state management tools like Provider and GETX

RESEARCH / PROJECTS

Plastic Usage Classification (Computer Vision) (Video) **March 2023 - April 2023**
- Engineered a precise product image classifier for plastic content into four categories using Python and PyTorch
- Achieved a remarkable 30% increase in model performance by combining ResNet50 and an MLP head
- Utilized Optuna for hyperparameter fine-tuning, resulting in an exceptional F1 score of 88.77%

Real-time 2-D Object Recognition (Computer Vision) (Video) **February 2023 - March 2023**
- Formulated and executed a real-time 2D object recognition on a white surface with a top-down camera setup
- Utilized C++ and OpenCV to Threshold, Segment live video feed to compute feature vector of significant regions
- Implemented and compared Nearest Neighbors and K Nearest Neighbors for the classification of over 12 items

Sequential Sentence Classification in Medical Abstracts (NLP, Deep Learning) **March 2022 - July 2022**
- Established a Deep Learning NLP model to sequentially classify sentences into five categories
- Leveraged PubMed 200k RCT dataset for training and validation over the medical research paper abstracts
- Applied transfer learning using pre-trained embeddings for an 85% F1 score

EXTRACURRICULAR ACTIVITIES

Smart India Hackathon | State-Level Winner for Deep Learning Project **August 2019 - September 2019**
- A state-of-the-art app leveraging deep learning and computer vision to detect driver drowsiness in real-time, ensuring safety for truck drivers