PRAVIN KUMAR

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OBJECTIVE

Highly flexible individual with a passion for research and development in the field of Deep Learning and Computer Vision. Hands on experience in Deep Learning Architecture and its algorithms. Coming with sound knowledge of Algorithms and Data Structure with area of research in recent trends and advances in computer vision and deep learning.

KEY SKILLS

Python	Tensorflow	OpenCV
scikit-learn	Pandas	C++
Algorithms	Data Structures	Computer Vision

EDUCATION

M.Tech - PhD. Dual Degree, Department of Information Technology — Expected 2023
Indian Institute of Information Technology Allahabad, U.P. INDIA. [**MTech CGPA: 7.75/10.00**]

DOEACC B-Level, Information Technology — Aug 2012 - June 2015
National Institute of Electronics and Information Technology, New Delhi, INDIA. [**Grade: 61/100**]

DOEACC A-Level, Information Technology — Jan 2010 - June 2011
National Institute of Electronics and Information Technology, New Delhi, INDIA. [**Grade: 73/100**]

DOEACC O-Level, Information Technology — Aug 2008 - Dec 2009
National Institute of Electronics and Information Technology, New Delhi, INDIA. [**Grade: 73/100**]

Higher Secondary School, Bihar State board — March 2007
RLSA Mahavidyalaya Vaishali, BIHAR, INDIA. [**Grade: 60/100**]

School, Bihar State board — March 2005
RVMS Maker Saran, BIHAR, INDIA. [**Grade: 59.14/100**]

SKILLS

Programming Languages and Frameworks:	Python, C++, TensorFlow, Keras, OpenCV
Computer Vision Applications:	Diabetic Retinopathy Lesions Segmentation, Medical Image Analysis, Facial Recognition, Object Tracking, Video Surveillance
Tools and IDEs:	MS Visual Studio code, Google Collab, Jupyter notebook.
CI/CD Tools:	Github, Docker.
Familiar with:	PyTorch, OOPs, Pillow, Numpy, Scipy, Matplotlib, Operating System, Computer Architecture.

EXPERIENCE

Data Scientist — Feb 2023 - Present
Ispeck Digital Solutions Private Limited — *Kolkata, West Bengal, India*

- Achieved X% growth for XYZ using A, B, and C skills.
- Led XYZ which led to X% of improvement in ABC
- Developed XYZ that did A, B, and C using X, Y, and Z.

PUBLICATIONS

1. Deeper Residual Unet for Microaneurysms Segmentation in Fundus Images. -2022

IEEE Journal of Biomedical and Health Informatics

- Developed deep learning models for diabetic retinopathy fundus image Microaneurysms segmentation
- Which are based on Unet but modified with the inclusion of residual units and modified identity mapping.
- This research paper is accepted and at final stage for printing and publishing online.

2. Exudates segmentation using improved Res-U-net. -2022

IEEE Journal of Biomedical and Health Informatics

- Developed deep learning models for diabetic retinopathy fundus image exudates (soft and hard) segmentation using Residual net and U-net as backbone of the model.
- The review is submitted and the research paper is in communication at final stage for acceptance.

3. A Review: Deep learning models for diabetic retinopathy lesions segmentation. -2023

- I conducted a comprehensive review of 60 recent research papers on diabetic retinopathy, utilizing deep learning architecture.
- This research paper is in the communication phase.

PROJECTS

1. Real Time Face Detection and Recognition using Webcam. June 2017—August 2017

Developed deep learning model for CVBL's Lab member entry details collecting system, using Python, Tensorflow, flask, sklearn, PIL.

2. Automatic Anti-Theft Security System — 'B'- level course project. 2015

A web based home security system developed using MatLab.

3. Digital Logic Circuit Design — 'A'- level course project. 2011

Developed in 'c'-language that take input as k-map and draw digital logic circuit on screen for Encoder, Decoder, Multiplexer, etc. It is in CUI and GUI interface.

4. Mini-Text Editor — 'O'- level course project. 2010

Developed some features of VI-editor in 'c'-language and named it mini-text editor. It is in CUI interface.

ACADEMIC ACCOMPLISHMENTS TRAINING

- Attended workshop on Advances in Deep Architectures for Signal, Image and Vision Applications (ADASIVA - 2018).
- Associated serving as teaching assistant for Deep-learning, Computer graphics, Image and video processing, Data compression, C language programming.
- Being mentor for interns and M-tech student in Computer Vision Biometric Lab (CVBL).
- Secured All India Rank 4619 among 100,000 students appeared for GATE-2016.

EXTRA-CURRICULAR ACTIVITIES

- Assisted in organizing and hospitality Coordinator for the IEEE Signal Processing Society meet and Summer School on Advances in Deep Architectures for Signal, Image and Vision Applications(ADASIVA) - 2018, 2019, 2020, 2021 and 2022.
- Assisted in Organizing Computer Vision and Image Processing - 5th International Conference in IIIT Allahabad 2021.
- IEEE Treasurer UP Section IIIT Allahabad, from 2019 - present.

- Presidential council member of Gymkhana and PhD. representative, from 2020 - 2022.

- Published video lectures on YouTube for 'C'-language programming, Data Structures, Algorithms Analyse and Design and Compiler Design. Channel name Pravin Kumar (March 2020 - present)