Akshay Nayak

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EDUCATION

National Institute of Technology, Warangal — (NITW), *TS, India*
Bachelors of Technology in Computer Science and Engineering *Jul. 2017 – Present.*
GPA: 6.68 / 10.00

Prince Academy, Sikar, *Rajasthan, India*
Intermediate — (CBSE) *Jul. 2015 – Jun. 2017*
Percentage Scored:- 90.5%

St. Marys's Sr. Sec. School, Sikar, *Rajasthan, India*
Indian Board of Secomndary Education Examination — (ICSE) *Jul. 2005 – Jun. 2015*
Marks Scored:- 92.5%

SKILLS SUMMARY

Libraries: TensorFlow, Keras, Android Studio, Scikit-Learn, Numpy, Scipy, Pandas, OpenCV, CUDA, Jupyter Notebook.
Techniques: Convolutional Neural Networks, Machine Learning Algorithms, Sparse Representation Learning, Evolutionary Algorithms, SVM, PCA, Classification and Clustering algorithms and so on.
Operating Systems: Linux, Android, Windows, RaspberryPi OS.
Mathematics: Statistics, Probability Theory, Modelling and Optimization Techniques, Stochastic Calculus and Monte Carlo Simulation.
Languages: English, Hindi.
Technical Languages: Python, Java, C++, C, Latex, SQL, Go.
Interests: Computer Vision, Data Science, Android, Distributed Systems, Robotics and Automation.
Soft Skills: Leadership, Event Management, Teamwork, Public Speaking, Project Management, Report Writing.

PUBLICATIONS

- Dr. M. Srinivas, Akshay Nayak, and Abhishek Bhatt.2019. **Forged File Detection and Steganographic content Identification (FFDASCI) using Deep Learning Techniques.** In the workshop proceedings of the CEUR working notes (CEUR-WS). Collocated with CLEF 2019. Vol 2380. September 9-12, 2019. Lugano, Switzerland.
- 'LDD-NASNet: Leukaemia Detection Using Dense Neural Architecture Search Network', IEEE International Conference on Image Processing, 2020. (**communicated**)
- 'IDENTIFICATION OF FORGED AND STEGO IMAGES (IFSI) USING DEEP LEARNING METHOD', IEEE International Conference on Image Processing, 2020. (**communicated**)
- 'CDD-NASNET: Automatic Coronavirus Disease(COVID-19) Detection Using Dense Neural Architecture Search Network', Safety Science, Elsevier journal. (**communicated**)

WORK EXPERIENCE

SETU, *Bengaluru, India*
Software development engineer Internship in Automation & QA *May. 2019 – Jul. 2019*
- Developed an authentication and authorization system for SETU collect.
- Prepared and submitted reports and other documentation to assist development team members.
- Developed an OAuth 2.0 protocol and worked on blockchain concepts for building a fully digitalized bank.

Skylark Labs, *San Francisco, USA*
Data Scientist Intern *Aug. 2018 – Apr. 2020*
- **Mentor : Amarjot Singh**, Research Scientist, Stanford University, USA.
- Custom artificial intelligence solutions for physical security based on Biometric Recognition and worked in the data modelling team.
- Worked on Disguised person identification by analyzing the facial landmarks and using pose estimation.

Microsoft Academia Accelerator, *Hyderabad, India*
Codefundo++ 2018 Institute Winner *Oct. 2018 – Feb. 2019*
- **Mentor : Sudheesh Singanamalla**, Ph.D. student, University of Washington, Seattle.
- I have worked the web application designed for natural disaster management and provides an optimal way of communication when the whole network is shattered.
- Worked on implementation of the distributed LTE (dLTE) network with the help of raspberry-pi-3.

National Institute of Technology, Warangal, *Warangal, India*
Undergraduate Research Assistant *Dec. 2018 – Present.*
- **Guide : Dr. M. Srinivas**, Assistant Professor, Department of Computer Science and Engineering, NIT Warangal.
- Worked on finding an optimal method of detecting COVID-19 infected person using deep learning techniques.
- Worked on developing an efficient way for detecting modified and forged files and also worked on identifying steganographic content identification.
- Worked on forming an sparse dictionary algorithm for fine grained classification.

CAD lab, Indian Institute of Science(IISc), Bengaluru, *Karnataka, India*
Undergraduate Research Internship *May. 2018 – Jul. 2018*

- **Guide : Dr. S. N. Omkar**, Chief Research Scientist, IISc Bengaluru.
- Worked on the project titled "Disguised Person Identification using Motion Signatures" using 3D-Resnet model and PAF.
- Extracted body points using gait analysis and worked on multitask cascaded convolutional neural network (MTCNN).
- Worked on various deep learning models like Resnet, ResNext, Scatternet and etc.

HONORS & AWARDS

- Finalists at Smart India Hackathon (SIH) 2020 — March, 2020.
- Second Runner's Up (3rd Prize) at Microsoft Codefundo++ 2019 Hackathon — October, 2019.
- Institute Winner at Microsoft Codefundo++ 2018 Hackathon — October, 2018.
- Institute Winner at INK Makeathon 2018 — September 2018.
- Winner at TechFresh 2017
- Awarded Kishore Vaigyanik Protsahan Yojana (KVPY) 2017 fellowship for excellent academic performance.

PROJECTS

AGNI
Microsoft Codefundo++ Hackathon, 2019 *May. 2019 – Sep. 2019*

- Built an azure blockchain based e-voting system proof of concept using ECDSA and RSA cryptographic schemes.
- I had developed a mock aadhar server which verifies the person's UIDAI number.

BRAHMASTRA
Microsoft Codefundo++ Competition, 2018 *Oct. 2018 – Feb. 2019*

- Developed a web application which helps in natural disaster management in low activity network areas as it is based on USSD messaging service and able to connect the users to the remaining world even in low network connection.
- I had developed the dLTE (distributed LTE) network with the help of raspberry-pi and have created a web application.

GARIMA
INK Makers makeathon, 2018 *Sep. 2018 – Sep. 2018*

- Have developed a web application which will provide the safest hour at that particular hour by considering the previous 10 years streetwise crime incident dataset and ensures a person's safety and generating the weights from it for particular crime according to their severity.
- I had developed a django application which is searching the safest and the easiest possible route between the source and the destination and have created a SVM model which has been used at the back end part.

TRINETRA
Academic Project *Jan. 2020 – Apr. 2020*

- I have built a convolutional neural network (CNN) and optical character recognition (OCR) based working model which is identifying a person riding on the bike without a helmet and recognizing the bike number plate in absence of helmet.
- Designed and implemented the full working flow and algorithm.

POSITIONS OF RESPONSIBILITY

Co-Founder
Big Data & Analytics Club, NIT Warangal *Dec. 2019 – Present.*

- This club has been established for furnishing an analytics culture at NITW.
- As the lead member for the Big Data & Analytics Club, I am responsible for the development of a research culture and improving the research culture at National Institute of Technology, Warangal. Additionally, I am organizing workshops in different areas of data science and analytics.

Sub-Coordinator
Sponsorship Department, SpringSpree'2020, NIT Warangal *Jan. 2020 – Apr. 2020*

- I worked as a Sponsorship Sub-Coordinator for NITW's cultural fest named SpringSpree.

Web Developer
Web and Software Development Cell (WSDC), NIT Warangal *Aug. 2018 – Aug. 2019*

- I worked as a software developer and have managed the institute website and have built a Django module for the inhouse result section on WSDC portal.

Executive Member
Computer Science and Engineering Association (CSEA), NIT Warangal *Aug. 2018 – Aug. 2019*

- I was a part of CSEA and have organized various technical events and workshops.

Event Manager
TechFresh, Technozion'18, NIT Warangal *Aug. 2018 – Oct. 2018*

- I worked as an event manager for one of the greatest event in our institute's technical fest Technozion.