

Narendra Kumar

Machine Learning Engineer



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<https://narendraakumar.github.io/curriculum-vitae/>



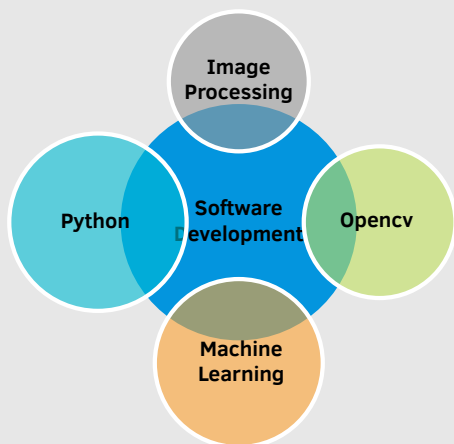
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Technical Skills

Overview



Programming

0 LOC —————> 5000 LOC

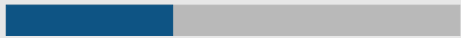
Python



Computer Vision



C • C++



Education

MTech., Aerospace Engineering (GPA: 8.30)

Specialization: Aerospace Structure
Indian Institute of Technology
2015 - 2017 | Kharagpur, India

BEng., Aeronautical Engineering (First Class)

Aeronautical Society Of India
2010 - 2015 | Delhi

Experience

Jan 2020 - Present

Senior Software Developer

Exponential AI

- Designed and implemented assisted extraction on the platform Which helps document types extraction.
- Integrate git to the platform to run FAAS.
- Implement the profiling to the platform for performance improvement.
- Successful POCs based on their use cases delivered to leading US hospitals and healthcare services.

Jan 2019 - 2020

Machine Learning Engineer

Exponential AI

- Worked on the development of dag to execute tasks sequentially and in parallel.
- Projects: Worked on DAG Executor which is made to execute task pipelines, Model pipelines, etc.
- Worked on building pipelines which got executed by DAG.
- Worked on Building ML pipelines to train, run, and evaluate models.
- Focused on developing machine learning models, production deployment, testing, scaling
- Designed feedback loop model used in the platform to improve model accuracy.
- Designed and worked on benchmark accuracy of platform extraction objects like headings, tables, fields, paragraphs, etc.
- Worked on the improvement of large-size model execution performance
- Created custom OCR engine using tesseract.

Jan 2018 - 2019

Trainee Machine Learning Engineer

Exponential Machines

- Projects: Enso can extract useful information from scanned and digital documents. The platform has various microservices like Image, Learning, Entity, NLP, and other microservices. The platform processes both structured (claims like CMS1500 which has a fixed structure) and unstructured (Invoices, resumes) documents. The extracted information is fed into entity and NLP microservices to identify entities and the Intent of the document. The platform is self-learning and accepts feedback from users on the extraction of headings, paragraphs, Intent, etc.
- Worked on Building a scalable application to process documents.
- Experience applying machine learning and computer vision principles to real-world data and working in Scanned and Documented Images.
- Develop algorithms for structured document extraction using configured templates.
- Worked on cleaning text files and noise-removing techniques.
- Worked in an agile framework, collaborating with business and research teams in story grooming, reviewing story/acceptance criteria and performance metrics.
- Worked on Structured Document processing using templates.

Sep 2016 - May 2017

Graduate Teaching Assistant

IIT Kgp

- Teaching Assistant During M-Tech program.

Expertise

- Image Processing using Python.
- Text extraction from images.
- Python Package uses **OpenCV, Numpy, Pandas, tesseract, ocropus**
- Operating system Ubuntu and IDE Pycharm**
- Tools:** Python, scikit-learn, Redis, HBase, Postgress, MongoDB, Docker, JIRA

Course Certification

Dec - 2016 **Web data analytics using Python, IIT Kharagpur** Short Term Course

- First module includes text extraction process, pre-processing and text processing and sentiment analysis of web log file.
- Second module Web log analysis using Python that has data processing, data collection, data cleaning, and modeling of user navigation behavior.

Dec - 2016 **Machine Learning** Online certification from Stanford University on Coursera

- Analyzing dataset to identify kind of patterns based on their behavior. Applying machine learning methods, principal component analysis, logistic regression on the large dataset to build the predictive model. Python uses extensively for analysis and dimensional visualization.
- This course contains linear, logistic regression, classification problem, neural network, etc.

Research

2015 - 2017 **Master's Project** IIT Kharagpur

- Detection of Delamination in the composite beam using ultrasonic wave propagation technique. Modeling of the beam is done using FEM and code written in MATLAB.
- Detection of crack in the beam using ultrasonic wave propagation method. Modeling of the beam is done using FEM and code were written in MATLAB.