

# Nitish Ramakrishnan

Authorized to work in the US

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## KEY SKILLS

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Machine Learning, Natural Language Processing, Data Mining and Analytics, Big Data Analytics, Data Science, Neuro-Fuzzy and Genetic Programming

## TECHNICAL SKILLS

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**Languages:** Python, C/ C++, R, JavaScript

**Web Technologies:** HTML, CSS, PHP

**Databases:** MySQL

**Programming Libraries:** OpenCV, Scikit-learn, Pandas, LightAutoML, TensorFlow, PyTorch, Keras, XGBoost

**Algorithms:** kNN, LSTM, CNN, RNN, Tree and Gradient Based, SVM

**Technologies:** Docker, AWS, Git, Tableau, A/B Testing, SQL

**Other Skills and Tools:** Adobe After Effects, Adobe Premiere Pro, Final Cut Pro, MS Office tools

## EDUCATION

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- Masters in Computer Science (May 2024) GPA: 3.97/4  
University of Colorado at Boulder, USA
- Bachelor of Technology in Computer Science and Engineering (May 2022) CGPA: 3.72/4  
SRM Institute of Science and Technology, Chennai, India

## PROFESSIONAL EXPERIENCE

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### ***Test Lead, Capstone Project – National Institute of Standards and Technology (NIST)***

***University of Colorado Boulder, Colorado, USA***

***Aug 2023 – May 2024***

- Undertook comprehensive manual and automated testing responsibilities for my capstone project, identifying critical usability and functional defects that led to significant improvements in the final product's user experience and performance.
- Successfully executed testing strategies and methodologies for front-end components, successfully ensuring product quality and reliability.

### ***Intern - National Renewable Energy Laboratory, Colorado, USA***

***July-Dec 2023***

- Worked in rewriting the frontend code to Typescript as part of the NREL OpenPATH team.
- Part of the rewrite team where we successfully rewrote most of it in 8 months.

### ***Scalable Auction System – Google Cloud Platform, Kubernetes, Docker, React, Redis, K6***

***University of Colorado Boulder, Colorado, USA***

***July-Dec 2023***

- Developed a web application based on microservices architecture enabling users to create auctions and bid on items. Implemented user dashboards to show current and historic auction data. Deployed application on GCP.
- Scripted k6 load tests to evaluate system performance during high load. Configured auto scalers based on metrics.

### ***Customer Attrition Forecasting (Banking Domain) – Implemented with ML model and Deployment with AWS***

***University of Colorado Boulder, Colorado, USA***

***Jan-May 2023***

- Successfully implemented ML model Long Short-Term Memory.
  - We deployed the model successfully by first creating a flask model file; set-up an ECS cluster, configured required tasks, and achieved automated deployment using AWS Code-Pipeline.
  - Effectively tested the working with Docker locally and checked the connections with Postman.
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## **SemEval-2022 Task 6 Part B: Legal Named Entities Extraction (L-NER)**

**University of Colorado Boulder, Colorado, USA**

**Aug-Dec 2022**

- Successfully extracted Legal Entities from text with 95% accuracy.
- We used the “Bidirectional Encoder Representations from Transformers” (BERT), DistilBERT, and XLNET which were effectively implemented.

## **Prediction of PM<sub>2.5</sub> level at an AQMD station: using nearby station’s data**

**University of Colorado Boulder, Colorado, USA**

**Aug-Dec 2022**

- Successfully designed three models 1. CNN, 2. LSTM, 3. XGBoost to predict Particulate Matter (PM<sub>2.5</sub>) for stations that (at the time of designing the models) lacked the ability to predict PM levels.
- Used data from AQMD stations in California and used 168 hours’ worth of data to predict the next 6 hours and exceeded accuracy over contemporary models.

## **Supply Chain Logistics Management: An Integration of Automated Machine Learning**

**SRM Institute, Chennai, India**

**Jan-Apr 2022**

- Integrated Automated Machine Learning in Supply Chain to predict backorders using LightAutoML to integrate with the existing Supply Chain. Successfully achieved a score of 97%.
- Reduced the active monitoring time of engineers for supply chain management.
- Demonstrated inadequacies in industry supply chain dataset.

## **COVID cases forecasting, SRM Institute, Chennai, India**

**Jul-Dec 2021**

- Analyzed COVID case trends and developed a trend forecasting model using Long Short-Term Memory (LSTM), a variety of recurrent neural network (RNN).

## **Intern, Verzeo, Chennai, India**

**April-May 2021**

- Trained a model to identify signs of aging using Tensorflow and OpenCV with a loss of 15%.
- Designed a heart disease prediction model using feature extraction with sk-learn and kNN.

## **Attendance Tracking system using GPS, SRM Institute, Chennai, India**

**Jan-May 2020**

- Developed a mobile application for attendance tracking using geolocation.
- Led a team of developers in full frontend development and partial backend development.
- Used a combination of Adobe XD and Android Studio to develop the GPS-based attendance system.

## **VI Microsystems, Chennai, India**

**April-May 2016**

- Interned in an R & D facility that builds microprocessor trainers and power systems

## **MS CS COURSES TAKEN**

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Machine Learning

Big Data Analytics

Natural Language Processing

Statistical Methods and Applications

Datacenterscale Computing

Computer Vision

## **UG CS COURSES TAKEN**

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Object Oriented Design and Programming

Advanced Programming Practice

Neuro Fuzzy and Genetic Programming

Data Mining and Analytics

Programming for Problem solving

Artificial Intelligence

Operating Systems

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## PUBLICATIONS

Unmesh, S.N., Septankulam Ramakrishnan, N.V., Jeevesh, P., Jayanthi, S., Prasanna Devi, S. Supply Chain Logistics Management: An Integration of Automated Machine Learning. International Journal of Mechanical Engineering; Vol 7(4), 2022. ISSN: 0974-5823. [Link to article](#)

## CERTIFICATIONS

Supervised Machine Learning: Regression and Classification, Coursera	Introduction to Machine Learning, Kaggle
Computer Vision, Kaggle	Fundamentals of Deep Learning, Nvidia
Data Cleaning, Kaggle	Digital Image Processing, Udemy
Data Visualization, Kaggle	Visualization of Data using Python and MATLAB, Udemy
Intermediate Machine Learning, Kaggle	Complete Responsive Development, Udemy
AI and High-Performance Computing, Intel	Python Programming for Beginners, Udemy
Pandas, Kaggle	Responsible Web Design Certification, FreeCodeCamp

## WORKSHOPS AND CONFERENCES

- **Supervised Machine Learning: Regression and Classification** Jan 2022  
DeepLearning.AI (Stanford) - Coursera
- **Ethical Hacking workshop** Jan 2020  
Indian Institute of Technology, Hyderabad - Azure Skynet solutions
- **5G - Beyond the hype** Jul 2019  
NOKIA
- **Artificial Intelligence and Machine learning,** Jul 2019  
Technobyte Workshop Indian Institute of Technology, Madras
- **FULL STACK Workshop** Sep 2018  
Ubertech
- **Level up – Entrepreneurship** Aug 2018  
Ubertech
- **Science and Engineering, A Journey** Jan 2017  
Indian Institute of Technology-FSCT Awareness Workshop
- **Design Thinking Workshop** Oct 2016  
India Today group
- Summer School on Astronomy May 2014
- City School Science Congress Feb 2014

## EXTRACURRICULAR ACTIVITIES

Model United Nations – University of Colorado Boulder	2023-2024
Volunteer, “Be My Eyes”	2021-Present
Volunteer, Niravi - food donation and service for the needy	2020-Present
Model United Nations – St. John’s Public School	2015-2018
Fundraising Committee Member, National Association for the Blind	2012-2013
Volunteer, Home for Orphan and Education (HOPE)	2006-2007
Professional Archery, participated and won state level competitions in India	
Table Tennis, participated and won state level competitions in India	
Keyboard, completed theory at Trinity College of London	
Violin, participated in Indian classical concerts	
Photography and videography, co-founded and led a club	