



Sindhura Kommu

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🔗 <https://github.com/sindhura-cs>

Education

Virginia Tech, M.S. in Computer Science

2023 Jan – present

Teaching Assistant: Machine Learning, Spring 2023, Prof. Lifu Huang

Indian Institute Of Technology Bombay (IIT Bombay),

2014 Jul – 2018 Jul

B.Tech, Computer Science & Engineering ✉

Teaching Assistant: Computer Programming and Utilization, Spring 2018, Prof. Krishna Subramaniam

Professional Experience

Fractal Analytics ✉

Senior Data Scientist - AI@Scale

2020 Feb – 2022 Dec | London, UK

- Designed and automated an **early warning system** for **fin-tech giant Visa** to detect **abrupt variations in behavior** early on, for the top merchants that **drive significant revenue in Europe**.
- This capability was heavily useful for Visa in gaining a competitive edge by successfully predicting the merchants on the verge of **bankruptcy during COVID-19**. It also helped in understanding the **scale of impact** way before the **recent geopolitical changes** in Europe snowballed into an economic crisis.
- **Successfully led** the development of distributed ML architecture on the Google cloud platform for Sky Group (Telecom Media) using live viewership data from their most popular TV channels. Received **10/10 NPS- Net Promoter Score** from the client. Achieved **cost reduction benefit of 60% per month**.
- **Co-authored a white paper** on how to build **scalable machine learning workflows** using Machine Learning Operations (**MLOps**) on the cloud including **Vertex AI, Cloud Composer, and CI/CD**.
- Created customer churn models using **50+ TB of data** belonging to **15M+ customers** improving prediction accuracy by **25% over traditional frameworks**. Accelerated data processing using distributed/serverless cloud computation accomplishing a **20X increase in processing speed**.

Data Scientist - Image & Video Analytics

2018 Jun – 2020 Jan | Mumbai, India

- Led ideation efforts and incorporated findings from various **research papers** like **YOLOv3, Fast-RCNN**, and BigGANs into a robust codebase for performing **image classification, object detection, and segmentation**. Achieved validation **accuracy** of above **90%** on real-world datasets.
- Developed a **successful MVP** - Minimum Viable Product to streamline the **insurance claims** process through **fraud reduction** and customer satisfaction by identifying home contents with an **accuracy** of above **95%** for a **leading British insurance firm**.
- Automated **video-content analysis** for P&G (consumer goods) to **detect action instances** like dishwashing, vacuum cleaning, etc in untrimmed household videos **reducing video size by 98%** to retain relevant clips. Shortened videos are used to **understand consumer interaction** with products and brands in order to create intelligent home care products across categories like home cleaning.

Samsung R&D Institute, Software Intern

2017 May – 2017 Jul | Bangalore, India

- Implemented **usability extension** in **Tizen Browser** that allows users to mirror and hook certain website regions to overcome the hassle of scrolling back and forth.

- Validated with major websites including **StackOverflow**, **Quora**, **ESPN Cricinfo**, **Times of India**, etc. This feature has now become standard across popular browsers and social media platforms.

Tech Mahindra, Software Intern

2016 May – 2016 Jul | Pune, India

- This Pilot project focuses on improving the efficiency of **Electric Vehicle Charging Systems**. It involves building complex hardware and software integrations that intelligently gather data on Electric Vehicle Charging patterns and transformer performance.
- Analyzed operations by monitoring charging patterns between Central System and Charge Point.

Scholastic Achievements

- Secured **99.17 percentile** in **IIT JEE (Advanced)** with an ALL India Rank of 1231 out of **1.5 lakh** candidates
- Scored percentiles **99.72** in Paper I and **98.51** in Paper II of **JEE(Main)** out of 13 lakh candidates
- Bagged state **Rank 25** in 3rd **International Mathematics Olympiad (IMO)**
- Secured **Rank 21** in **South Indian Science Olympiad(SISO)**
- Attained **Rank 6** in the 38th **Mathematical Olympiad** conducted by Andhra Pradesh Association of Mathematics Teachers (**APAMT**)

Certifications

Structuring Machine Learning Projects

Coursera,
deeplearning.ai

Convolutional Neural Networks

Coursera,
deeplearning.ai

Deep learning A-Z, Hand-On Artificial Neural Networks

Udemy

Neural Networks and Deep Learning

Coursera,
deeplearning.ai

Improving Deep Neural Networks: Hyperparam Tuning, Regularization and Optimization

Coursera

Deep learning, Nanodegree Program

Udacity

Sequences, Time Series and Prediction

Coursera,
deeplearning.ai

The Science of Well-Being

Coursera, Yale University

Technical Skills

Cloud Build (GCP), **Python** (Languages), **C** (Languages), **C++** (Languages), **SQL** (Languages), **JavaScript** (Languages), **HTML** (Languages), **CSS** (Languages), **MATLAB** (Languages), **Pytorch** (Frameworks), **Pyspark** (Frameworks), **Tensorflow** (Frameworks), **Keras** (Frameworks), **MLflow** (Frameworks), **Pandas** (Frameworks), **Scipy** (Frameworks), **Numpy** (Frameworks), **Matplotlib** (Frameworks), **Git** (Tools), **Visual Studio** (Tools), **Tableau** (Tools), **Jira** (Tools), **Airflow** (Tools), **Great Expectations** (Tools), **MySQL** (Databases), **Neo4j** (Databases), **Postgres** (Databases), **BigQuery** (GCP), **Vertex AI** (GCP), **Cloud Composer** (GCP), **Data Studio** (GCP), **Terraform** (GCP), **Cloud Build** (GCP)