Harish Prakash
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Education

- **SRM Institute of Science and Technology** — Chennai, India
  Bachelor of Technology in Electronics and Communication Engineering; GPA: 8.2/10.0 — *July. 2017 – Present*
- **Srimathi Sundaravalli Memorial School** — Chennai, India
  Grade 12; Obtained Grade: 87.5% — *Jun. 2016 – May. 2017*
- **Srimathi Sundaravalli Memorial School** — Chennai, India
  Grade 10; CGPA: 10/10 — *Jun. 2014 – May. 2015*

Professional Experience

- **Aara Tech Private Limited** — Chennai, India
  Data Science Research Intern — *Dec. 2019 - January. 2020*
  - Worked in the Logistics Sector to develop an end-to-end model for choosing warehouses based on population clusters in a given topography
  - Developed a new clustering technique using **Unsupervised Learning** techniques for determination of optimized candidate locations
- **TakenMind Technologies** — Virtual
  Data Analyst — *July. 2019*
  - Analyzed and Visualised data in **Python** using Pycharm IDE on various datasets; used **Tableau** for creative plot visualisations
  - Became familiar with NumPy, Pandas, Matplotlib, scikit-learn and other basic **libraries** for data preprocessing and visualisation
- **Brakes India Private Limited** — Chennai, India
  InPlant Trainee (ML applications) — *June. 2019*
  - Understood the applications of **Machine Learning** in brake shoe testing rigs deployed for fault detection and performance measurement; observed multi-component assembly lines
  - Developed 3D projections of brake shoes in advanced designing softwares – Catia-V5 and AutoCAD

Technical Projects

- **Sound-based Bird Classifier using Transfer Learning** — Chennai, India
  Undergraduate Thesis (Ongoing) — *August. 2020 – Present*
  - Currently working on a model to preprocess audio signals and identify bird species based on spectroscopy and multi-label image classification
  - Planning to implement Transfer Learning and deep CNNs to achieve state-of-the-art accuracy
- **An Ensemble Clustering Model for Warehouse Location Determination** — Chennai, India
  Pending Submission — *Dec. 2019 – Mar. 2020*
  - Developed an **unsupervised clustering algorithm** based on density-based spatial clustering of address points to identify an ideal warehouse candidate location
  - Considerable CPU time reduction was achieved in contrast to similar iterations with existing clustering techniques under similar conditions

Freelance Projects

- **Hand-written Digits Recognizer**: Created a neural network model to predict handwritten digits with 90% accuracy
- **Dogs & Cats Breed Classifier**: Trained ResNet34 with Transfer Learning to differentiate dog and cat breeds
- **Predicting Artists from Artworks**: Worked on Kaggle Dataset using fastai-v2 to achieve state-of-the-art accuracy
- **Prediction of Rt for COVID-19**: Implemented Realtime Effective Reproduction Number (Rt) using Indian Datasets
- **Employee Attrition Prediction**: Analysed and visualised data to predict factors behind employee attrition
- **Recommender Systems**: Implemented different recommendation techniques for movie recommendations
- **Flower Classifier**: Scraped images from google to classify different flowers through image classification techniques

Professional Development

- **Coursera** — MOOC Platform
  Deep Learning Specialization — *June. 2020 – Aug. 2020*
- **Coursera** — MOOC Platform
  Infectious Disease Modelling Specialization — *June. 2020 – Aug. 2020*
- **Indian Institute of Remote Sensing, ISRO** — Distance Learning
  Basic Principle of Remote Sensing — *June. 2020*
- **National Programme on Technology Enhanced Learning** — MOOC Platform
  Data Science for Engineers; Intermediate Python — *Jul. 2019 – Sep. 2019*
- **National Programme on Technology Enhanced Learning** — MOOC Platform
  Introduction to Machine Learning — *Jan. 2020 – Apr. 2020*
- **Practical deep learning for Coders,v3** — MOOC Platform
  Deep learning using fastai-v3 — *July. 2020 – Present*

Technical Skills

- **Languages**: Python, R, C++, C, SQL
- **Web Applications**: Jupyter Notebook, Google Colab
- **Libraries used**: Fastai, Pytorch, Tensorflow, Keras, scikit-learn
- **Softwares**: Pycharm, Conda, Visual Studio
- **Simulations**: Matlab, Octave, AutoCAD
- **Parallel Programming**: CUDA

Position of Responsibility

- **Head Organizer, Literary Club** — *Jan. 2018 - June. 2019*
  - Event Coordinator for literary events in Milan'18 and Milan'19 - an inter-college national cultural fest
  - Spearheaded IMPACT'18 - A debut national level debate competition by SRM
- **School Pupil Leader** — *June. 2016 - Mar. 2017*
  - Voted by majority to spearhead and lead high school decision committees
  - Planned, coordinated and led the high school contingent in cultural, sports and competitive events

Volunteer Experience

- **U&I** — *July. 2019 – Apr. 2020*
  - Volunteered for 2 hours/week to teach basic education for underprivileged children under 6th grade
  - Conducted workshops, facilitated social events and worked with co-volunteers to build sustainable lesson plans
- **Swachh Bharat Mission** — *June. 2018 – July. 2018*
  - Participated in Indian government's program to attain universal sanitation for 100 hours
  - Led a team of 10 members, adopted a village (Sithalapakkam, Chennai) and extensively campaigned for hygiene awareness; organized competitions and created a cleanliness drive to sanitize multiple areas.