SATYARTH PRAVEEN
Research Engineer

Contact

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in **Satyarth Praveen**

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🏠 Gurugram, Haryana

Education

Bachelor of Technology in Computer Engineering

Percentage : 71.54 %

Aug 2013 - June 2017

Delhi Technological University, New Delhi, India

Computer Skills

Programming Languages:
C/C++, Java, Python, R, Matlab, Scala, SQL, Pig, Hive

Software/Packages:
Robot OS (ROS), Nvidia CUDA, TensorFlow, Caffe, Hadoop, Apache Spark

Database :
MySQL, Oracle, SQLite

Web Technologies:
Html, XML, Javascript.

Platform: Windows, MacOS, Linux

AI Competencies

- Computer Vision
- Autonomous Systems
- Neural Networks / Deep Learning
- Natural Language Processing
- Genetic Algorithms

About

A **Research Engineer** - Design, build, deploy Machine Learning applications to solve real-world problems empirically. Experience with varied forms of practical data, including Image, Speech, Text, Video, Motion-capture & other high-dimensional data. Enthusiastic towards exploring my horizons in the field of **Artificial Intelligence**. With a soft corner for research.

Core competencies

- Performance Analysis
- Exceptional time management
- Probability and Statistics
- Impact and Influence
- Initiative & Execution
- Technical direction and product strategies
- Team leadership
- Exceptional organizational skills
- Advanced critical thinking.

Research | Publications

Breast Cancer Detection using Two-Fold Genetic Evolution of Neural Network Ensembles (TF-GENNE)

Designed an algorithm to obtain a maximum accuracy of 99.90% on a 70-30 Train-Test data split. Presented this research at the International Conference on Data Science and Engineering 2016 (IEEE), and received a special mention for the work. [https://ieeexplore.ieee.org/document/7823969]

Opinion Extraction from Quora using User-Biased Sentiment Analysis

Studied the formulation of an individual's opinion and replicated it using an algorithm with minimum user interaction. Presented this research at the International Conference on Information System Design and Intelligent Applications 2017 (Springer) and bagged the Best Paper Award, along with a reservation for the extended study submission to a Non-Paid Springer Journal. [https://link.springer.com/chapter/10.1007%2F978-981-10-7512-4_22]

Experience

Research Engineer   **The Hi-Tech Robotic Systemz Ltd.**

Gurgaon, *India*   **July'17-Present**

- Working on the refinement of Object Detection.
- Designed and deployed the Active Learning pipeline for Semantic Segmentation.
- Led the in-house built Stereo Vision project for disparity (coded in **CUDA C++**) and depth estimation.
- Used reprojection techniques to merge the depth information with other intelligent inferences from another camera.
- Exploited camera calibration techniques for accurate parameters.
- Explored the Stixel-based technique for efficient scene understanding.
- Deployed the above algorithms on a small embedded system with very limited computing resources.

Management skills

- Strategy Planning
- Sentimental Analysis
- Client Management

Personal Skills

- Creative and logical.
- Organizing Capabilities.
- Goal attainment.
- Quick Learner.
- Problem solving ability.
- Co-operative and a keen observer.

Sports

- Mixed Martial Arts
- Boxing
- Pool
- Basketball
- Table Tennis
- Badminton
- Athletics

Awards and Recognition

- Trusted with **Sole-Responsibility of multiple projects.**
- Awarded for the research on **Opinion Extraction from Quora using User-Biased Sentiment Analysis** presented at the **International Conference** on Information System Design and Intelligent Applications at **Da Nang, Vietnam.**
- **Associate Editor** at DTU Times , The college Newsletter (DTU, New Delhi) May 2016 - May 2017
- Hostel President at Ramanujan Hostel (DTU, New Delhi) August 2013 - May 2014

Data Science Intern   **vNative**
New Delhi, *India*   **Oct'16-Feb'17**

- Built a Native Recommendation Engine for the advertisements based on the host website content in R Programming Language .
- Implemented a lazy execution of the recommendation engine to cause zero lag at the user end, irrespective of the size of the database.

Research Assistant   **Delhi Technological University**
New Delhi, *India*   **Sept'16-May'17**

- Researched under Dr. Akshi Kumar and published work on Opinion Formulation and Sentiment Analysis.

Research Intern   **Oracle India Pvt. Ltd.**
Bangalore, *India*   **Jun'16-Aug'16**

- Formulated a Generic Recommender System prototype (R and Spark implementation). The prototype unifies the varying datasets and learns from multiple types of data to minimize dataset.

Research Intern   **Decisionstats**
New Delhi, *India*   **Feb'16-Apr'16**

- Did a thorough research to compare the use of **Python** and **R** for **Data Scientists**.

Backend Intern   **Cardback**
New Delhi, *India*   **March'15-Aug'15**

- Worked on API-Testing and researched on the Start-up's use case for NoSQL Databases.
- Worked on Advanced Event-Based Triggers and Database Architecture, for dynamic handling of data.

Backend Intern   **SwiftIntern**
New Delhi, *India*   **March'15-Aug'15**

- Designed the entire backend Database Architecture for the start-up, incorporating multiple levels of inheritance with the attempt to maintain an intuitive flow.

Projects

- **Human Presence Detection using Dynamic Ensemble Voting Technique (DEVT)**
- Built an ensemble of custom learning models with the core smart enough to evolve the best models as sub-ensemble. Obtained 97.38% accuracy which is better than any individual model's performance.
- **Breast Cancer Detection using Evolutionary Smart Neural Network (ESNN)**
- Analyzed the trade-off between input data compressions and Neural Network's performance. Improved efficiency via constructive collaboration of lesser important features and evolution through Genetic Algorithms for a 96.20% accuracy.
- **Emotion Detection from Call Center Audio Recordings**
- Analyzed Call Center recordings for customer mood detection. Studied the various audio feature extractions and trained a genetically evolved SVM learning model for an accuracy of 72.70%.
- **Data Analysis using Java MapReduce**
- Analyzed data using Hadoop MapReduce APIs in Java. Worked with multiple reducers, table joins, and distributed cache table joins.