Arpit Kapoor

Data Scientist

An aspiring Data Scientist proficient in machine learning and python programming, with demonstrated familiarity with large scale data gathering. analysis tools and generating insight into data using a wide range of ML algorithms.

201, Sri Krishna Apartments,
Patrika Nagar Rd No 2,
Hitech City, Hyderabad, Telangana - 500081

+91 9884202383
kapoor.arpit97@gmail.com
Links: Medium Website

EXPERIENCE

3Qi Labs, Hyderabad—*Data Scientist*

NOV 2019 - Present

Project: **Data Anomaly Detection using machine learning**

Key Responsibilities:

- Used Machine Learning to detect anomalies in large scale data.
- Highlight data quality issues in data such as referential integrity failure using machine learning.
- Exploratory Data Analysis (EDA) to generate data analysis reports.
- Develop and maintain big data analysis pipelines PySpark and hadoop.
- Create and maintain visualization and analysis suite in Kibana and elasticsearch.

Bomotix, Hyderabad— *Machine Learning Developer*

JAN 2019 - NOV 2019

Key Responsibilities:

- Develop Deep learning pipelines for computer vision applications including object detection, object tracking and human pose estimation.
- Productionised the models and code for deployment with Google cloud using Kubernetes
- Developed new procedures for requirements gathering, testing, scripting and documentation to strengthen quality and functionality of applications.

The University of Sydney, NSW Australia— *Research Intern (Machine Learning)*

JUN 2018 - AUG 2018

Key Responsibilities:

- Research and develop Bayesian machine learning models including deep neural networks using MCMC samplers.
- Implement various Markov Chain Monte-Carlo based sampling Schemes transfer learning and evolutionary neural learning with deep neural networks.
- Part of three research project; all published in reputed international Journals

SKILLS

Programming languages
Python, C++, and R

Data Technologies
Hadoop, PySpark, ElasticSearch

Machine Learning
PyTorch, Apache MxNet, TensorFlow, Scikit-learn

Computer Vision
OpenCV

Visualization
Kibana, Tableau

ACHIEVEMENTS

Secured **a Gold, 2 silver and a bronze** medal in **RoboGames'17**, **USA** in various humanoid challenges.

Secured **3rd position** in IEEE/RSJ IROS 2017 Humanoid Application Challenge, held in Vancouver, Canada.

Recipient of **WATConsult Innovation Award** in BITS ATMOS'16 for Humanoid Teleoperation project.

Selected for **Engineering the Eye 5 Hackathon**(June 2016), organised by LVPEI, Hyd

5 Publications in Top tier Journals including IEEE and Elsivier

Completed 3 months fully compensated Research Internship at USyd.

EDUCATION

SRM Institute of Science and Technology, Chennai — *B.Tech Computer Science and Engineering*

JUL 2015 - MAY 2019

CGPA: **9.05**

Delhi Public School, Agra, Uttar Pradesh — CBSE Sr. Secondary

APRIL 2013 - MARCH 2015

Stream: **Science** (**94.6%**)

CO-ACADEMIC ACTIVITIES

SRM Team Humanoid, SRM Institute of Science and Technology — *Team Leader*

SEP 2015 - PRESENT

Manage the Team and develop Humanoid Robots.

Developed software packages for humanoid robotic systems.

Represented the University and won several accolades in various international robotics competitions.

PROJECTS

Anomaly Detection

An Autoencoders based algorithm developed in Tensorflow and trained using Apache Spark to detect anomalies in structured large data.

Human Detection and Tracking

Developed an end-to-end pipeline for detecting players in sports videos and tracking them throughout the videos. Yolo V3 was trained for person detection while a combination of Siamese Network and DeepSORT was used for tracking them.

Hierarchical Deep Reinforcement Learning for Humanoids

Hierarchical Reinforcement learning inspired approach used to teach a higher order complex task, such as solving a maze, to a humanoid.

Bayesian neural Transfer Learning

Transfer Learning for Bayesian neural networks using Markov Chain Monte Carlo (MCMC) sampling scheme published in Neuroevolution.

Bayesian neuroevolution

Parallel multi-core Evolutionary MCMC for Deep Learning Models

PUBLICATIONS

"Surrogate-assisted Bayesian inversion for landscape and basin evolution models", Geoscientific Model Development, 13(7):2959-2979, July 2020

"Surrogate-assisted parallel tempering for Bayesian neural learning", Elsevier Engineering Applications of Artificial Intelligence, Volume 94, 2020, 103700, ISSN 0952-1976

"Bayesian neural multi-source transfer learning". *Neurocomputing*, *378*, 54-64.

"Teleoperation of a Humanoid Robot with Motion Imitation and Legged Locomotion", in IEEE International Conference on Advanced Robotics and Mechatronics 2018.

"Dynamic Lateral Balance of humanoid robot on unstable surface", IEEE International Conference On Electronics, Communication, Computer Technologies and Optimization Techniques 2017.

"Reinforcement Learning Methods and Approaches for Humanoid Robotics", 4th International Conference on Artificial Intelligence and Evolutionary Computations in Engineering Systems. (Conference Presentation)