Satish Kumar Keshri

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EDUCATION

• Master of Science

July, 2018 - July, 2020

MSc in Big Data Analytics (Data Science)

Ramakrishna Mission Vivekananda Educational and Research Institute, Belur, India

CGPA: 9.69/10.0, University Gold Medalist

Relevant Courses: Machine Learning, Probability and Stochastic Processes, Optimization Algorithms, Multivariate Statistics, Linear Algebra

• Bachelor of Science

August, 2015 - May, 2018

 BSc (Hons.) in Mathematics and Computing

Institute of Mathematics and Applications, Bhubaneswar, India

CGPA: 8.85/10.0, First Class Distinction, Top of the Class

Relevant Courses: Real Analysis, Multivariable Calculus, Linear Algebra, Group and Field Theory, Statistics, Algorithms

RESEARCH EXPERIENCE

• Research Assistant

November, 2023 - Present

Centre for Artificial Intelligence (CAI), Indraprastha Institute of Information Technology, Delhi (IIIT -Delhi) Hosted by Dr. Ranjitha Prasad

- Working on Continual Machine Learning to turn any machine learning model into a "lifelong learner". I am focused on addressing the problem of "catastrophic forgetting" for machine learning models with provable guarantees of convergence. My work primarily focuses on significantly mitigating this issue, ensuring that trained models maintain high performance levels across both new and old tasks. This approach allows for seamless model reuse by eliminating the need of extensive retraining even when the underlying data distribution changes. This work also tackles the issue of data heterogeneity with data privacy preservation through "Federated" learning frameworks.
- I am also working on robustness in continual federated learning.

WORK EXPERIENCE

• Sr. Data Scientist

April, 2022 - October, 2023

Dr. Reddy's Laboratories, R&D Centre, Hyderabad

• Data Scientist

June, 2020 - March, 2022

Dr. Reddy's Laboratories, Hyderabad, India

• Data Science Intern

Feb, 2020 - May, 2020

Dr. Reddy's Laboratories, Hyderabad

PUBLICATIONS

Papers Under Review

1. On the Convergence of Continual Federated Learning, submitted for review Joint work with Nazreen Shah and Dr. Ranjitha Prasad

Working Papers

- 1. Bayesian Federated Continual Learning with Overlapped Task Boundaries
- 2. Robust Continual Federated Learning Under Byzantine Attacks

HONORS AND AWARDS

- ET Datacon Award, 2022 from The Economics Times, India for best analytics project during my tenure at Dr. Reddy's Laboratories, India
- Gold Medal, awarded for University First Rank and Academic Excellence in my Master's, 2020
- INSPIRE Scholar, awarded by Department of Science and Technology (DST), Govt. of India, 2015

REFERENCES

• Dr. Ranjitha Prasad

Assistant Professor, ECE

Indraprastha Institute of Information Technology, Delhi

Email: ranjitha@iiitd.ac.in Phone: +91 - 9148050726

• Reverend Swami Vidyapradananda

Assistant Professor, Department of Computer Science and Deputy Registrar Ramakrishna Mission Vivekananda Educational and Research Institute, Belur

 $Email: \ vidyapradananda@gm.rkmvu.ac.in$

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