Kundan Kumar

kkumar@iastate.edu| 650-250-3248 | [LinkedIn](#) |[GitHub](#) | [Website](#) | [ORCID](#) | Ames, Iowa 50010

SUMMARY

Full-time PhD candidate in Computer Science and Minor in Statistics with 5+ years of Professional software development and deep knowledge in algorithms, data structure, Machine/Deep Learning, and high-scale applications and able to perform advanced statistical analysis and predictive modeling.

EDUCATION

Iowa State University, Ames, Iowa

PhD In Computer Science(major) & Statistics(minor)   Aug 2020 - Dec 2024(tentative)
Master of Science in Computer Science (STEM)

BIT Sindri, Dhanbad, India

Bachelor of Technology in Electronics & Communication engineering

SKILLS

Technical: Python, R, JAVA, SAS, HTML/HTML5, SQL, Pytorch, Scikit-Learn, tensorflow, Javascript, and Matlab/Octave, OpenGym.
Tools   : ArcGIS, Hadoop, Spark, Tableau , Leaflet, Rest API/SoapUI, OpenDss(power system simulator), Docker, Kubernetes

PROFESSIONAL EXPERIENCE

Comcast- Centennial, CO   **Software Engineer**   Jul 2019 – Mar 2020
- Created data pipelines using Amazon kinesis and RabbitMQ and developed spring boot application for Comcast system.
- Created Dashboards with Presto DB and performed data analysis by finding fraudulent activities using Machine Learning for activation and provisioning systems.

IBM- Austin, TX   **Software Engineer**   Jan 2019 – June 2019
- Worked on the Cloud development (Soft layer) for scaling vertically and horizontally with OpenShift.
- Integrated Grafana and Created flask applications for server's failure and success on the cloud platform.

Hewlett Packard (HP) - Boise, Idaho   **Software Engineer**   Apr 2017 – Dec 2018
- Migrated applications and servers from the HPI domain to HPE domain and performed security patches on the new application.
- Developed OAUTH 2.0 authentication and Java spring Boot application with REST API and Apache/WebLogic Servers.

Tata Consultancy Services (TCS) - Mumbai, India   **System Engineer**   June 2012 – Dec 2014
- Developed and Created ETL tools for data integration and migration into the data warehouse.
- Saved ~$100k by performing database tuning including optimizing SQL queries and indexing. Won excellence award for DB tuning.

UNIVERSITY WORK EXPERIENCES

Department of Computer Science, Iowa State University, Ames, Iowa
Software Development Graduate Teaching Assistant   Aug 2020 – Present
- Led a group of 4 software developers and eight teams designing mobile and web apps and game development.
- Mentored and supervised 60 students in managing collaborative code development and deployment with agile methodology.
- Conducted a few classes on software development and industry practices on development and deployment.

Department of Electrical and Computer Engineering, Iowa State University, Ames, Iowa
Computer Science Graduate Research Assistant   Aug 2022 – Present

- Applied ~10 computational deep reinforcement learning in a Volt-Var application to analyze power simulation data to minimize voltage violations, power loss, and control errors.
- Applied attacks on mitigation techniques on deep reinforcement learning to protect the control system.

PUBLICATIONS AND REWARD

- Submitted Physics-based Deep Reinforcement Learning for Grid-Resilient Volt-VAR Control paper in IEEE Smart-Grid 2023
- Accepted Deep RL-based Volt-VAR Control and Attack Resiliency for DER-integrated Distribution Grids in ISGT-2024.
- Published Deep learning and pattern-based methodology for multivariable sensor data regression Paper in ICMLA-2022.
- Selected for Oxford Machine Learning Summer School 2022.

ACADEMIC PROJECTS

- Developed and Applied Deep Learning and Computer Vision for Motion-Prediction-for-Autonomous Vehicles.
- Developed and implemented Deep Learning algorithms on the Multiclass and multilabel objects on the Kaggle datasets.
- Developed a networking protocol for a distributed file transfer system.