

SUJATA ADHIKARI

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EDUCATION

Academic Qualifications.....

- **University School of Information and Communication Technology** **Delhi, India**
Bachelor of Technology in Computer Science and Engineering, 7.87/10.0 **2016–2020**
Electives: Soft-computing(A), Artificial Intelligence(A+)
- **Kendriya Vidyalaya** **Dehradun, India**
Higher Secondary School, Physics (A1) Chemistry(A2) Maths (A2) **2014–2016**

Certification.....

- **DeepLearning.AI** **Online**
LangChain for LLM Application Development,
Skills: Models, Memory, Chains
- **Coursera** **Online**
Transfer learning in NLP using Tensorflow,
Skills: Machine learning, TensorFlow, NLP
- **Coursera** **Online**
Generative AI with Large Language Models ,
Skills: Generative AI Life cycle, Fine-Tuning, PEFT, RLFH, LLM

Research Experience

- **Department of Computer Science, USICT** **Delhi, India**
Undergraduate, Advisor: Dr. Rahul Johari **2019–2020**
Minor thesis: Routing in IoT Network using CupCarbon Simulator
 - Comprehensively reviewed Internet of Things (IoT) routing protocols, focusing on energy efficiency and scalability.
 - Implemented the MQTT protocol for data transmission between devices, ensuring reliable and secure communication.
 - Contributed to the open-source network simulator Cup Carbon by implementing novel methods for the inbuilt algorithm.

- **Department of Computer Science, USICT** **Delhi, India**
undergraduate, Advisor: Dr. Rahul Johari *2019–2020*
Major Thesis: Routing in IoT using Fuzzy Logic
- Conducted an exhaustive analysis of existing IoT routing protocols and their corresponding optimization methodologies.
 - Focused on enhancing the D-LPCN (Distributed Least Polar-Angle Connected Node) algorithm by integrating fuzzy logic. Initially designed for identifying boundary nodes within a network.
 - Leveraged fuzzy logic to enable the selection of the most optimal node for information transmission. This approach facilitated greater network efficiency.

PUBLICATION And PRESENTATION

Publication

- *R. Johari and S. Adhikari, "Routing in IoT Network using CupCarbon Simulator," 2020 7th International Conference on Signal Processing and Integrated Networks (SPIN), Noida, India, 2020, pp. 301-306, doi: 10.1109/SPIN48934.2020.9071227.*

Conference

- 7th International Conference on Signal Processing and Integrated Networks (SPIN-2020) in *Routing in IoT Network using CupCarbon Simulator*

PROFESSIONAL EXPERIENCE

- **United Nations** **Remote**
Data Annotator *Sep 2023 - Oct 2013*
- Engaged as an online UN volunteer within the data analytics team.
 - Contributed to labeling data for underwater life, supporting sustainable development.
 - Successfully labeled over 500 data sets.
- **TATA CONSULTANCY SERVICES-Cargill** **Pune, India**
Network Engineer- Europe region *Apr 2022–Sept 2023*
- Achieved a 30% reduction in device compliance issues within our tools and consistently maintained a low level of compliance, earning recognition as the primary point of contact for resolving tool-related issues.
 - Collaborated with cross-functional teams to implement wireless upgrades, including controllers and access points.
 - Solely managed networking tools for the region, enhanced team efficiency through streamlined operational approvals, and facilitated training sessions to guide new employees in utilizing various tools and technology effectively.

TATA CONSULTANCY SERVICES-Cargill

Pune, India

○ *Network Engineer- North America region*

Feb 2021–Apr 2022

- Tailored project plans to align with customer requirements and devised network design and implementation strategies.
- Effectively oversaw implementation approvals, resulting in a significant reduction in implementation issues.
- Diagnosed and resolved network issues by swiftly identifying root causes and implementing effective solutions.

Notable Projects

○ **Potato Disease Classification:** Numpy, Pandas, TensorFlow, CNN

- Inspired working alongside my mother in our kitchen garden. When our home-grown potatoes began to show signs of disease
- Created an image classification model using Convolutional Neural Networks (CNN).
- Predicted potato diseases based on their leaf images, achieving a test accuracy rate of 80% .

○ **Finance analyst:** langchain, OpenAi, LLM

- An intuitive news research tool simplifying information retrieval.
- Users input article URLs and ask questions to gain insightful stock market and financial domain analysis effortlessly.
- Process article content through LangChain's UnstructuredURL Loader.

SKILLS

- **Programming Languages:** C and C++, Python, HTML, CSS, SQL, Python Libraries- Pandas, NumPy, Scikit-learn, Tensorflow, Matplotlib.
- **Software Skills:** Jupyter Notebook, Microsoft PowerBi, Microsoft Excel, GitHub, Git, Vscode, Google Colab, Cupcarbon, Matlab
- **Business Skills:** Communication, Teamwork, Problem-solving, Adaptability, Presentation Skills, Leadership, Collaboration
- **Languages:** Nepali(Native), English(Fluent), Hindi(Fluent), French(Basic)
- **Other:** Statistics, Routing Protocols-TCP/UDP, Machine Learning, IoT, DBMS, Data Analysis, Research Skills, Routers, Switches, SD-WAN, Firewall upgrade, Network monitoring Tools

LEADERSHIP and SERVICE

Mess Committee Member

○ *Satpura Girls Hostel, GGSIPU*

2017–2019

Managed and optimized Mess Budgets and Menus, conducting semi-annual audits of mess bills. Additionally, I orchestrated and coordinated various hostel events, including the Fresher Party and Diwali Day celebrations.

Member and Organizer

- *International student office-GGSIPU* 2018–2020

Facilitated student meetings and supported new students with their university-related tasks. Conducted data collection initiatives involving students from different universities. Also, spearheaded the planning and execution of various international student meets.

Member and Presenter

- *WOSY-World Organization for Student and Youth* 2018–2020

As a dedicated member of the WOSY Delhi chapter, I actively participated in numerous meetings and events. I had the privilege of representing Nepal at International Women's Day. Additionally, I played a pivotal role in event coordination, with a focus on inclusivity, to broaden our group's outreach and impact.

GRANTS and AWARDS

- **Research Grant:** Awarded Rs 8000 for my research publication by USICT
- **Organizer Award:** Honored by the International Student Office for the successful organization of international student meets for two consecutive years.
- **Yoga Competition:** I achieved the 2nd position in an inter-college yoga competition, showcasing my dedication and skills and competing nationally.

TEACHING EXPERIENCE

- **Tutor**
 - Instructing STEM courses to underprivileged high school students.
 - Designed and structured comprehensive lesson plans, engaging assignments, and tests.
 - Facilitated and guided group discussions on both social and academic topics.

REFERENCES

- **Dr. Rahul Johari**
Associate Professor-USICT-GGSIPU
Email: rahul@ipu.ac.in
- **Dr. Amit Prakash Singh**
Professor-USICT-GGSIPU
Email: amit@ipu.ac.in
- **Alex Abreu**
Network Lead-Cargill, TCS
Email: alex.abreu@tcs.com