

Saurav Kumar Singh

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EDUCATION

- **Indian Institute of Technology(IIT) Tirupati** Yearpadu, Tirupati
• **Masters of Technology in Computer Science;** Passing out year :-2023
Courses :- *Advanced data structures and algorithm, Machine Learning, Parallel Computation, Reinforcement Learning, Computational Methods of Optimization, Artificial Neural Networks, Linear algebra, Probability*
- **Heritage Institute of Technology** Kolkata, West Bengal
• **Bachelors of Technology in Computer Science;** Passing out year :-2020
Courses :- *Operating System, DBMS, Discrete Mathematics, Theory of Computation*

SKILLS SUMMARY

- **Languages:** C, C++, Python, SQL, Kotlin
- **Tools:** GIT, OpenMP, Google-Colab, MS Visual Studio, Android Studio, MS Office
- **Libraries:** Pandas, Numpy, Pytorch, Scikit-learn, Seaborn

ACADEMIC PROJECTS

- **Catalytic Computation:** Designed a *Catalytic Turing machine* to utilize extra space(*catalytic tape*) for our computation, and ensures that extra space restores to prior state post computation. In real world this catalytic tape is considered as space beyond our assigned memory in the RAM. The core concept is derived from *Catalytic Simulation of Straight line Transparent Programming*. (April '22)
- **Sentiment classifier for Twitter data:** Built an *LSTM* based neural network with *Glove Embedding*, to classify the sentiments in positive, negative and neutral categories. Also developed a method for vocabulary selection in an efficient manner, resulted in 10% increase in macro-averaged F1-score. Achieved F1-score of 0.65 on test data (Oct '18)
- **Tic Tac Toe game (Reinforcement Learning):** Developed an RL agent to play the Tic-Tac-Toe game, and trained it to find the best policy by leveraging *SARSA* algorithm. The trained agent was able to win 96-98% of the games. (Nov '21)
- **Mess food review system (Android Development):** Developed a real time food review system for the college mess, to help students to rate as well as write reviews for the food. Reviews were further reviewed by the mess staff along with the hostel management to take necessary actions. Real time database, *Firebase* is used to store the reviews. (May '21)
- **Online Insurance Policy(Web Development):** Designed a website to accommodate end-to-end process, from login to checkout, as a final year project. Developed the UI to track the active policies, maturity dates, premium and do basic recommendation. (Apr '19)

EXPERIENCE

Technical Trainer NextGen Academy (Bahra University Campus), Wagnaghat, Solan

Currently working as a Technical Trainer at NextGen Academy (Bahra University Campus), a third-party institution offering specialized Bachelor's Degrees in Artificial Intelligence, Machine Learning, and Cybersecurity.

Assistant Professor Bahra University, Wagnaghat, Solan

Served as an Assistant Professor at Bahra University for one year, teaching core subjects including C Programming, Data Structures, Programming in Python, and Machine Learning, while fostering a deep understanding of computational concepts and practical problem-solving skills among students.

Teaching Assistant IIT Tirupati, Andhra Pradesh

Managed the daily learning activities, including marking attendance, and creating assessment report. Proctored semester examinations and evaluated the answer sheets for bachelor students. And also provided one-on-one support to students who need it.

ACCOLADES AND EXTRA-CURRICULAR

- Secured rank 884 in GATE CS2020
- Sports - Table Tennis, Badminton
- Hobbies - Guitar playing and Singing