

Anubhav Mendhiratta

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EDUCATION

PES University, Bangalore
JVM Shyamali, Ranchi
St. Anthony's, Ranchi

B-TECH in Computer Science | CGPA : 9.09
Senior Secondary(XII) | PERCENTAGE : 94.2
Secondary(X) | PERCENTAGE : 95

Sep 2021 – May 2025
May 2019 – May 2021
Apr 2007 – Mar 2019

TECHNICAL SKILLS

Languages : C, Java, HTML, CSS, JavaScript, Python, MySQL, DSA

Web Dev : JQuery, React.js, Next.js, Flask, Bootstrap

DevOps : Docker, Kubernetes, AWS, Big Data

Machine Learning : Graph Neural Network, Data Analytics, PyTorch, TensorFlow

Others : Cloud Computing, Operating System, Computer Networks, CIE (Entrepreneurship), Design Critique

EXPERIENCE

Summer Intern | PESU Research Foundation

May-June 2023

- Dived into IOT and conducted a research on the impact of different RPL attacks such as Sinkhole, Version Number, BlackHole and DIS Flooding attacks by introducing a malicious node in smart cities using Cooja Simulator.
- Analysed the impact of attacks using different metrics such as PDR which decreased by 20%, Power Consumption which increased by 97% and observed changes in Latency depending on attacks.

PROJECTS

STWBODE- Enhancing Traffic Forecasting through comparative walk analysis using GNN (link)

May-July 2024

- GCN, LSTM, Random Walk, DeepWalk, Node2Vec, tensorflow, networkx
- Developed a spatio-temporal walk-based ordinary differential equation model for traffic forecasting, leveraging walks for the top 100 nodes to enhance prediction accuracy.
- Achieved a state-of-the-art MAE of 22.62 and RMSE of 34.68 on the PEMS4 dataset, reducing the error significantly as a novel contribution.

MeloMatch - A Song Recommendation System (link)

Oct-Nov 2023

- Pandas, sklearn, NLTK, Pickle, Streamlit
- Developed a song recommendation system, which processes input song descriptions by cleaning, tokenizing, and vectorizing them.
- Utilized cosine similarity to compare songs and generate a top 10 recommendation list based on similarity scores.

Leveraging Graph Digital Twin for Fault Detection and Improved Power Grid Stability in Smart Cities (link) Feb-Nov 2024

- Azure, Unity Engine, Neo4j, Machine Learning, Cooja
- Created a digital twin for fault detection and power grid stability in smart cities, using a graph-based approach to model the smart grid.
- Generated data for fault detection, trained an ML model with an accuracy of 98.6%, and provided precise predictions for power grid stability, significantly enhancing reliability.

PUBLICATIONS

Analysing the Impact of RPL Routing Attacks on the Smart City Ecosystems (link)

May-June 2023

- Co-authored a paper examining how RPL routing attacks affect the stability and security of smart city ecosystems.
- Conducted research on the effects of various RPL attacks—Sinkhole, Version Number, BlackHole, and DIS Flooding—by introducing malicious nodes in smart city simulations using Cooja.
- Analyzed the impact using metrics such as Packet Delivery Ratio (PDR) which decreased by 20%, Power Consumption which increased by 97%, and observed latency changes across different attacks.

POSITION OF RESPONSIBILITY

- Mentor at HealthSparks Hackathon organized by IEEE-RAS club of PESU-ECC
- Head of Hospitality in Shunya PESU-ECC
- Head of Campaigning in Weal PESU-ECC
- Technical Lead in CodeChef PESU-ECC
- Sports Captain in St. Anthony's School

ACHIEVEMENTS

Prof. CNR Rao Merit Scholarship

- This scholarship is received by top 5% of the students as determined by the merit of CGPA.

Prof. MRD Merit Scholarship | 3x

- This scholarship is received by top 20% of the students as determined by the merit of SGPA.