Pankaj Chejara

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pankajchejara23@gmail.com.com | | pankajchejara23 (skype)

SKILLS

PROGRAMMING

Python and iPython Notebook
R
SQL
JavaScript, HTML, and CSS

MACHINE LEARNING

Regression
Support Vector Machines
Naive Bayes
K-Nearest Neighbors
Random Forests
Decision Trees
Neural Networks
Cluster Analyses
Natural Language Processing

RESEARCH

Problem Solving
Analytical Thinking
Scientific Writing
Communication
Attention to Details
Time Management

EDUCATION

PH.D., DATA ANALYTICS

Tallinn University
Expected 2024 | Tallinn, Estonia

MTECH, COMPUTER ENG.

Malviya National Institute of Technology
June 2012 | Jaipur, India

MCA, COMPUTER APP.

Rajasthan Technical University
June 2010 | Kota, India

BSC, MATHEMATICS

University of Rajasthan
May 2007 | Jaipur, India

LINKS

Github:// **pankaj**
LinkedIn:// **pankajchejara**
Scholar:// **pankajchejara**

EXPERIENCE

TALLINN UNIVERSITY | Applied Data Science Researcher

Sep 2019 – Till date | Tallinn, Estonia

- Developed **a python library** to analyze audio data collected using a microphone array
- Managed the gathering, cleaning, and pre-processing of audio-video and log data to serve as inputs to **collaboration quality prediction model**
- Built **random forest models** to predict different types of collaboration behaviors during group works in Estonian classrooms
- Proposed **a dimensionality reduction-based approach** to understand students' collaboration through observational data
- **Visualized multivariate clusters** of facial expressions, head movement, and lip movement factors using K-Means algorithm
- **Collaboration quality monitoring application**
  - Led product development of collaboration quality monitoring prototype, **CoTrack** and developed web-based version of a Hardware prototype (Raspberry Pi) to capture and analyze audio, video, log from group's meeting
  - Handled **front-end and back-end development** responsibilities using Python's Django, Bootstrap, SQL, JQuery, and Google Speech-to-Text API
  - Integrated a real-time dashboard to visualize the group dynamics based on speaking participation and speech-to-text data
  - Received international recognition at the prestigious LAK2023 conference in the USA, winning the **Best Demonstration Award**.
  - Conducted **usability testing** with different stakeholders, including teachers, researchers, students, to understand perceived ease-of-use and usefulness of a collaboration quality monitoring system
- **Energy-sustainable scenarios designing application**
  - Development of a map-based prototype featuring interactive visualization for the Portugal region, **SEEDS**. This innovative tool empowers users to explore diverse energy generation scenarios and their impact on climate
  - Managed **front-end and back-end development** responsibilities using Python's Django, Bootstrap, Java script and Plotly

IIITM | Researcher

Aug 2016 – June 2018 | Gwalior, India

- Performed **comparative analysis of various community detection algorithms** on social-network datasets
- Proposed **a machine learning based approach** to predict information diffusion phenomenon in social networks.
- Integrated a small module in Moodle LMS to routinely capture user's self-reported emotional state measures during learning activities
- **YouTube video watching behavior tracking application**
  - Development of a **module for Moodle LMS** to capture video watching behaviors of students using YouTube API