Vishesh Chahar

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Education

Bachelor's of Engineering in Computer Engineering
Thapar Institute of Engineering and Technology
2020 – present | Patiala

Senior Secondary School Graduation
Bhavan Vidyalaya
2020 | Chandigarh

Secondary School Graduate
St. John's High School
2018 | Chandigarh

Projects

Diagnosis Pal
Python, ML

- Directed the creation of a disease diagnosis system using Categorical Naive Bayes on a synthetically generated dataset, ensuring data quality through expert curation.
- Implemented sophisticated data preprocessing techniques, such as strategic dataset splitting and meticulous shuffling-based concatenation, establishing a robust foundation for precise disease prediction based on symptom profiles.
- Enhanced predictive accuracy by extracting the top 3 model predictions per test case, strategically elevating performance and achieving an impressive 84% MAP@K score.
- Engineered a comprehensive enhancement strategy via GridSearchCV for rigorous hyperparameter tuning, yielding a remarkable 92% MAP@K score improvement.

Thriftscape
Python, ML, matplotlib

- Engineered a market trend prediction software for e-commerce platforms, incorporating price trend analysis and classification of new products based on the price range for seamless database integration.
- Leveraged multiple regression curves and Gaussian Naïve Bayes algorithm to accurately forecast market prices and classify products effectively.
- Spearheaded optimization efforts on regression curves, significantly enhancing model accuracy and predictive capabilities resulting in a 25% increase in accuracy values.

Professional Experience

Lead Data Acquisition, Electric Vehicle and Powertrain Engineer
Team Fateh
2020 – present

- Drove transformative data acquisition for an FSAE car, reshaping performance analysis via a cutting-edge wireless telemetry system.
- Orchestrated real-time data capture from the engine and onboard sensors, empowering insightful choices in testing and competitive racing scenarios.
- Championed seamless telemetry integration, enhancing communication efficiency and design synergy, instrumental in clinching 19 trophies and prestigious awards totaling 4,10,000 INR.
- Engineered a revolutionary engine tuning model leveraging GANs, propelling a remarkable 27% power surge.
- Headed the Electric Vehicle Department, spearheading comprehensive Electric Powertrain optimization while mentoring cross-disciplinary teams.

Achievements:

- Formula Bharat 2022:
  Overall 3rd, Statics 1st, Engineering Design 2nd, Cost 1st
- SUPRA SAEINDIA 2022:
  Overall 2nd, Engineering Design 2nd, Endurance Event 1st, Acceleration Event 1st, cash prize 2,10,000
- Formula Bharat 2023:
  Overall 6th, Statics 1st, Engineering Design 1st, Cost 1st
- SUPRA SAEINDIA 2023:
  Overall 2nd, Engineering Design 1st, Autocross Event 1st, cash prize 2,00,000

Skills

Programming Languages
Python, R, C, C++, C#, JavaScript, AngularJS, Dart, SQL, Kotlin

Tools
RStudio, VSCode, Pandas, NumPy, Flutter, Android SDK, PostgreSQL, WandB, matplotlib, Seaborn, Optimumlap, MATLAB, SOLIDWORKS

Hardware
Raspberry PI, Arduino UNO, Arduino Nano, Arduino Mega, ESP32, ESP 8266, PE3 8400P