SAI KIRAN NANDIPATI

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EDUCATION

MS in Computer Science (Data Science) **Normal, IL, US** **Aug 2022 – May 2024**
Illinois State University (GPA – 3.6/4.0)

B- Tech Electronics & Communication Engineering (Computer-Engineering) ` **A.P, India** **April 2018 – May 2022**
R.V.R & J.C college of Engineering (GPA – 8.6/10.0)

SKILLS

Programming: Java, C++, Python, JavaScript, HTML, CSS, Shell Scripting, React JS, Angular , HTML.
Tools, Technologies & Frame Works: Spring Framework, Spring REST, Hibernate, Machine Learning, Spark, Hadoop, GIT, VS Code, Jira, Wix.
Database & Cloud : MY SQL, ORACLE SQL, Mongo DB, AWS(EC2 ,S3, GLUE, Amazon EMR, Sage Maker, Kinesis, Quick Sight)
Hard Skills: Problem-solving using Programming Logic, OOPs, Data-Structures & Algorithms.
Libraries: Pandas, NumPy, PySpark, Keras, TensorFlow, Scikit-learn, Stats Models ,PyTorch, Matplotlib, Seaborn, Plotly, NLTK.

WORK EXPERIENCE

Graduate Research Assistant ***Normal, IL, US*** ***MAY 2023– Present***
Computer Science Dept, Illinois State University

- Collaborated with the **Ochsner Research Group** for the past **2** years, applying computational methods to **healthcare** by designing **research pipelines** that integrate clinical and non-clinical data for **machine learning prediction models**.
- Processed millions of **EHR's** with complex **SQL** queries, managed cloud-based data projects, and developed analytics pipelines using Apache Spark, Python, and SQL, produced reports and Jupyter notebooks, mastered **OMOP** and Observational **OHDSI** tools, and laid the foundation for **3 research papers** through weekly faculty collaboration meetings.
- Designed **predictive models** using **supervised machine learning,** improving prediction accuracy by 15%, reducing error rate by 20%, and enhancing R^2 score by 45% over existing models.
- Implemented **classification models** (**Random Forest, SVM, XGBoost, Logistic Regression**), achieving 90% accuracy in categorizing metrics.

Programmer Analyst- Intern ***Hyderabad, India*** ***March 2022 – Oct 2022***
Cognizant

- Managed activities and customer expectations, and coordinated test plans with the **architect team**, enhancing testing efficiency by 20% and improving client satisfaction.
- Executed scalability, load, and endurance tests, analyzed results to ensure application performance within acceptable limits, identified and documented performance bottlenecks, reducing incident reports by 15%.
- Participated in daily **SCRUM** and triage calls, assisted in creating documentation and reports for **15+** client-specific applications; provided timely updates to clients and contributed to project reports.
- Devised and executed **automation scripts**, increasing **test coverage**, and reducing manual testing time by 25%.

Centre of Excellence National Instruments Innovation- Intern ***Guntur, A.P, India*** ***May 2021 – June 2021***
National Instruments (NI)

- Led research and implemented an **automated solution** for a **virtual ATM** machine, increasing efficiency by 45% and improving accuracy by 10% over existing solutions. Produced comprehensive reports documenting project findings and outcomes, providing valuable insights for future developments.

PROJECTS

Hospital Management System (HMS) | *JAVA, HTML, CSS, Java Script, SQL, Git, Spring boot*

- Led and contributed a responsive HMS website, leveraging cutting-edge technologies (**Java 75%, MySQL,** etc.) to enhance patient care through efficient system and database management, including online appointment scheduling.
- Ensured high-quality software development by adhering to **SDLC** methodology, integrating essential features like **prescription management, bill generation, and online payment** functionalities into the HMS.
- Optimized healthcare facility operations by developing and validating critical functions like **appointment scheduling and medical record management,** contributing to enhanced operational effectiveness.

Data Insight Dashboard | *HTML, CSS, Java Script, Node.js*

- Designed and integrated popular visualization methods, including **interactive linear Regression, bar, tree, and intensity plots**, for diverse data sets, increasing user engagement by 35%.
- Performed data cleaning and preprocessing using **Python (pandas),** reducing errors, and broadening visualization scope by 20%.

Little Frishy's LLC | *Wix*

- Led and contributed for developing a real world website for a **small fishing lure business**, facilitating an efficient online sales and content management using **Wix**, increased their sales by 40%.

Ochsner Emergency Department Overcrowding Scale (OEDOCS2.0) | *ML, Python, SQL, Scikit-learn, Tensor flow*

- Developed Ochsner Emergency Department Overcrowding Scale (OEDOCS 2.0), improving ED crowding prediction with a 20% reduction in **RMSE** and a 40% enhancement in **R2** score, overcoming limitations of the National Emergency Department Overcrowding Study (**NEDOCS**).
- Led the development of a supervised machine learning prediction pipeline, testing **24** ML algorithms and achieving nearly 75% accuracy.
- Automated patient classification into fast acute or acute tracks using **K-means** and **DBSCAN** clustering algorithms, significantly enhancing emergency department efficiency by achieving a **high Silhouette Coefficient** and minimizing **inertia** between clusters through precise patient categorization.
- Utilized Python and advanced machine learning techniques to analyze and visually represent workflow patterns in collaboration with the Ochsner Research team.

EXTRA-CURRICULAR ACTIVITIES

- Contributing as a Data Scientist in research communities like **N3C** (National COVID Cohort Collaborative), advancing healthcare research by developing **Big data** and **Machine learning pipelines**, and performing in-depth analysis of **EHR** data to support **innovative research initiatives**.
- President of **Code Chef-R.V.R,** led a team of **200** in organizing technical events and coding competitions, earning an "**Award for Excellence**" from the chancellor of R.V.R & J.C College of Engineering.
- Mentored over **20** high school students in math and English, improving their average grades by 15% through well-prepared **lesson plans** and coordinated activities with fellow volunteers.