Uma Sivakumar

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EDUCATION

Texas A&M University **Texas, United States**
Master of Science in Data Science **(GPA: 3.7/4)** **Aug 2023 - Dec 2024**
Courses: Machine Learning, Information Storage & Retrieval, Data Visualization, Parallel Computing,Statistics,Databases,Data Mining

International Institute of Information Technology **Bangalore, India**
Certification in Advanced Data Science **(GPA: 3.71/4)** **Sep 2022 - May 2023**
Courses: Python, NLP, Data Analysis, Probability,Inferential Statistics, Hypothesis Testing, Data Visualization, Deep Learning,SQL,AI

SRM Institute of Science and Technology **Chennai, India**
Bachelor of Technology in Information Technology **(First Class with Distinction, GPA: 8.72/10)** **Jul 2015 - May 2019**
Courses: Machine Learning, Calculus, Data Structures and Algorithms, Probability and Statistics, Linear Algebra,Cloud Computing,AI

SKILLS

- **Languages:** Python, C++, SQL (Databases: Oracle, PostgreSQL, MySQL), MongoDB, R, CCL(Cerner Command Language), C.
- **Machine Learning & Data Science:** TensorFlow, Scikit-learn, PyTorch, NLTK, OpenCV, Pandas, NumPy, Seaborn.
- **Cloud and Big Data:** Familiar with AWS, Apache Kafka, Spark, HBase.
- **Tools/Frameworks:** Docker, Git, Microsoft Excel.

EXPERIENCE

Research Assistant — Texas A&M University **(Feb 2024 - May 2024) — College Station, Texas**
- Developed risk assessment models using Bayesian Networks to evaluate COVID-19 impacts on US healthcare supply chain.
- Utilized quantitative analysis to enhance model accuracy by 20%, demonstrating ability to interpret complex information.
- Worked closely with stakeholders to leverage data for decision-making in critical healthcare sectors using Bayesian Networks.

Software Engineer — Siemens Technology **(Jun 2022 - Jul 2023) — Bangalore, India**
- Spearheaded development and optimization of product solutions across 6 products (Audit, Calendar Options, IDB, Proagent, PMO, SES), resulting in a 15% improvement in overall system performance.
- Revitalized and enhanced software features innovatively to align seamlessly with evolving technical requirements, ensuring heightened user satisfaction and increased adoption rates.
- Collaborated with cross-functional teams to resolve critical performance issues, improving system stability by 10%.

Software Engineer II & Software Engineer I — Cerner Healthcare **(Jul 2019 - Jun 2022) — Bangalore, India**
- Initiated and deployed new functionalities, such as recurring orders, contributing to code optimization and revamping of application.
- Responded to IRC calls, delivering solutions and packages within a remarkable 24-hour turnaround time.
- Directed multiple optimizations for the Millennium Scheduling Module, resulting in a 30% reduction in response time.
- Engaged in code reviews, resulting in a 20% decrease in post-deployment issues.
- Collaborated on component-level technical designs, streamlining development processes and slimming project timelines by 25%.

Software Intern — Cerner Healthcare **(Jan 2019 - Jul 2019) — Bangalore, India**
- Spearheaded transformation of a batch processing system into a near-real-time streaming system using Apache Kafka, Apache Spark, and Apache Hbase with Java.
- Attained boosted data processing speed and efficiency, resulting in a substantial decrease in data processing times.
- Led migration process efficiently, minimizing disruptions and ensuring seamless continuity in healthcare data analysis.

PROJECTS

4D Visualization of Thunderstorms Using HLMA: Developing a real-time 4D visualization platform for lightning data to enhance storm monitoring and public safety. (Present)

P.E.E.R: Developed an educational content aggregator and personalized recommender system using AWS PostgreSQL and BERT for recommendations. This demonstrates working with large data sets, using AWS, and implementing machine learning models. (May'24)

Traffic Signal Recognition: Engineered a CNN model with 88.9% accuracy for real-time traffic signal detection and categorization using Python, TensorFlow, and OpenCV. Compiled and annotated a diverse dataset, incorporating data augmentation to bolster model resilience. Deployed model in a real-time application to enhance traffic management systems. (Jun'24)

Predicted Bike-Sharing System Demand: Utilized Predictive Modelling such as Multiple Linear Regression with regularization techniques (Ridge and Lasso), and ElasticNet regression to forecast demand rates for shared bikes. Used statistical techniques and tests such as ANOVA and T-test, succeeding 100% accuracy. (Dec'23)

Maximized Customer Retention in the Telecom Industry: Built and implemented machine learning models (Random Forest, XGBoost, Logistic Regression) to enhance customer retention, achieving a 91% accuracy rate. Demonstrates the ability to analyze large datasets and derive actionable insights. Demonstrates my ability to work on predictive modeling using Python and handle large data sets effectively. (May'23)

AWARDS & RECOGNITION

- **NOTT Award (Night On The Town):** Given to an associate for above-and-beyond contribution, (Cerner Healthcare) **March 2021.**
- **Quarterly team award – Quality,** (Cerner Healthcare): **Q1 2021.**