Uma Sivakumar

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EDUCATION

Texas A&M University **Texas, United States**
Master of Science in Data Science **(GPA: 3.75/4)** **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.
- **Tools:** GIT, Docker, SVN, Visual Code, Visual Studio, Jupyter.
- **Libraries and Framework:** Scikit-learn, TensorFlow, NLTK, PyTorch, OpenCV, Numpy, Pandas, Seaborn, Matplotlib, sqlAlchemy.
- **Exposed to:** Apache Kafka, Spark, HBase.

EXPERIENCE

Research Assistant — Texas A&M University **(Feb 2024 - May 2024) — College Station, Texas**
- Contributed to development of risk assessment models for evaluating impact of COVID-19 on infrastructure of the US supply chain.
- Employed Bayesian Networks to model and assess risks across critical healthcare sectors, enabling data-driven mitigation strategies.
- Integrated Bayesian Risk and Decision-Making Frameworks, improving model accuracy by 20%.

Software Engineer — Siemens Technology **(Jun 2022 - Jul 2023) — Bangalore, India**
- Spearheaded development and configuration of code for new and existing 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.
- Played a pivotal role in resolving critical bugs within the WinCC graphics team, including performance and memory leak issues, resulting in a 10% improvement in system stability.

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

P.E.E.R: Developed an educational content aggregator and personalized recommender system using AWS PostgreSQL for data storage, data collection from Google Books and Udemy APIs for content aggregation with over 100K records each, and BERT for personalized recommendations, boosting user learning experiences with efficient, tailored educational resources. (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 Multiple Linear Regression with regularization techniques (Ridge and Lasso), and ElasticNet regression to forecast demand rates for shared bikes. Used statistical methods such as ANOVA and T-test, succeeding 100% accuracy. (Dec'23)

Maximized Customer Retention in the Telecom Industry: AdoptedLogistic Regression, Random Forest, and XGBoost. Conducted rigorous feature engineering with a judicious set of features for model building, employing dimensionality reduction techniques, handling class imbalance. Achieving a 91% accuracy with the Random Forest model. (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.**