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, Data Visualization, Statistics, Parallel Computing, Data Mining,Databases,Information Storage & Retrieval

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, Deep Learning, SQL, Data Visualization, Probability,Inferential Statistics, Hypothesis Testing,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, Cloud Computing, Data Structures and Algorithms, Probability and Statistics, Linear Algebra,Calculus,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, BERT, 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 Bayesian Network models to assess healthcare supply chain risks, improving model accuracy by 20%.
- Applied statistical methodologies to extract actionable insights, collaborating with cross-functional teams to inform critical decisions.
- 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, 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, while effectively communicating technical resolutions to cross-functional teams.
- 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 and presented system architectures to stakeholders, streamlining development processes and reducing 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 and Oracle with Java optimizing the flow of healthcare.
- 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 a personalized recommendation system using BERT and AWS for educational content. Integrated advanced search algorithms to enhance query relevance and user experience. (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 with regularization techniques to forecast demand rates for shared bikes. Used statistical modeling 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 using Random Forest and XGBoost models with a 91% accuracy to optimize customer retention. Demonstrates my ability to work on predictive modeling using Python and handle large data sets effectively. (May'23)

AWARDS & RECOGNITION

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