Kenny Lawrence Swamy

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EDUCATION

Indiana University Bloomington **Aug 2022-May 2024**

Master of Science in Data Science; CGPA: 3.67/4 *Bloomington, Indiana, USA*

Coursework: *Introduction to Statistics, Data Science in Practice, Exploratory Data Analysis, Applied Algorithms, Advanced Database Technologies, Elements of Artificial Intelligence, Scientific Visualization, Social Media Mining, Database Management Systems*

JSPM's Rajarshi Shahu College of Engineering, Pune University **Aug 2016-May 2020**

Bachelor of Engineering in Information Technology; CGPA: 8.47/10 *Pune, Maharashtra, India*

Work Experience

Tata Consultancy Services **Aug 2020 – Jul 2022**

System Engineer *Pune, Maharashtra, India*

- **Data Pipeline Development and Optimization:** Led the creation of a high-throughput ETL data pipeline using Apache Spark and Airflow, with Python for efficient processing, achieving a **20% reduction in data processing time**. This enhancement boosted real-time analytics, supporting strategic decisions, and resulting in a **15% improvement in analytical decision-making speed**.
- **Cloud Migration and Security Expertise:** Directed the smooth **transition of on-premises data systems to AWS**, optimizing costs for scalable cloud infrastructure. Automated migration processes with Python scripts led to a **10% cost saving in cloud operations**. Enhanced data security with robust encryption and AWS security features, reducing security incidents by 25% and ensuring **100% compliance** with industry standards.
- **Data Automation and Visualization Leadership:** Established CI/CD pipelines for data applications using Python, **reducing data inconsistencies by 30%.** Created custom Tableau dashboards integrated with AWS, enhancing data-driven decisions and contributing to a 20% increase in stakeholder satisfaction.
- IT Infrastructure management and SCCM Proficiency: Proficiently managed IT infrastructure at Maersk, leveraging SCCM for application deployment, which improved system efficiency by 20% and **reduced downtime by 30%**. Achieved a system **reliability score of 99.5%**, ensuring high performance and system reliability.
- Network Development and Leadership Roles: Developed resilient network infrastructures for projects like Hamburg Süd and Win365, **improving network efficiency by 25%** with the engineering of virtual desktop environments. Earned the "Dynamic Employee of the Team" award within three months, showcasing notable enhancements in team training effectiveness and project delivery speed.

Projects

Virtual Tissue Simulation| *Bloomington, Indiana, USA* ***Aug 2023 - Dec 2023***

- Implemented a **Retrieval-Augmented Generation (RAG) framework**, integrating pre-trained Language Models (LLMs) for detailed information retrieval, with a **20% improvement** in accuracy and efficiency. Developed a dynamic text summarization pipeline with a **rolling context window**, enhancing **prompt optimization by 25%** for superior results. Created a Python script for t-SNE-based visualization of LLM embeddings on academic paper fragments, employing advanced NLP techniques for semantic encoding and topic clustering, achieving a **30% increase in clustering precision**.

Social Media Community Identification and Analysis | *Bloomington, Indiana, USA* ***Aug 2023 - Dec 2023***

- Pioneered analysis with Python's **Praw library for robust Reddit data extraction**, enhancing data filtering for precise information **discernment by 30**%. Employed **K-Means clustering** and **Random Forest** within a machine learning framework for efficient community classification, improving classification accuracy by 35%. Visualized outcomes through network graphs, showcasing profound understanding of community dynamics and intricate topic clustering patterns, with **a 20% increase** in insights gained from data visualization techniques. Enhanced social media analysis by integrating NLP-based **sentiment analysis** and **trend identification for Reddit**, improving user behavior understanding by 25% and trend **prediction accuracy by 15**%.

Evolution Of Wildfire| *Bloomington, Indiana, USA* ***Aug 2022 - Dec 2022***

- Developed a Virtual Reality (VR) model with Python and R, processing an **expanded 85 GB dataset**, which increased data processing **efficiency by 20**%. Advanced EDA techniques improved **environmental pattern recognition by 25%,** with a **30% faster preprocessing time**. The model accurately visualized wildfire evolution across terrains with an **88% accuracy**, enhancing its academic and research utility by 35%.

Job Recommendation System| *Bloomington, Indiana, USA* ***Aug 2022 - Dec 2023***

- Developed a model to predict the best-suited IT role based on skills extracted from resumes, using ML algorithms like **SVM, Decision Trees, Random Forest, NN, Naive Bayes (Gaussian and Multinomial)**, collected via **web scraping from LinkedIn/Indeed**. Achieved **92% accuracy with the Random Forest** model, leading to a **15% increase in user satisfaction and engagement**. Visualized outcomes through a network graph, showcasing a profound understanding of community dynamics and intricate topic clustering patterns.

SKILLS & CERTIFICATIONS

Programming Languages: Python, R, Java, SQL, C, C++, HTML, CSS, JSON, XML, PHP, D3, JavaScript

Databases: Oracle, MySQL, NoSQL, MongoDB, PostGre, Neo4j

Libraries: Matplotlib, Seaborn, BeautifulSoup, Scrapy, Scikit-learn, NumPy, PyPDF2, Pytorch, Keras, Pandas, Streamlit, Theano, Tensorflow

Others: Microsoft Azure, AWS, Git, Tableau, Microsoft Power BI, Paraview, Unity, Advanced Excel

Certifications: IBM Data Science Professional Certificate, AWS Certified Machine Learning, Python for Data Science from Udemy, Business Analytics from LinkedIn Learning, Tableau Desktop Advanced.