Yamini Surendrasingh Manral

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EXPERIENCE

Data Scientist I   Aug 2024 – Present
Abecedarian LLC   *Boston, MA*
- Analyzed customer behavior and shopping patterns, driving a 15% increase in retention with targeted strategies, and optimized recommendation algorithms using collaborative and content-based filtering, boosting clickthrough rate by 20%.
- Led cross-functional A/B tests with marketing and product teams, enhancing website design and product recommendations.

Data Analyst Intern   May 2023 – Dec 2023
Dinosys Infotech   *Mumbai, India*
- Collected, processed, and managed 100 TB of security data from over 10 sources, ensuring availability to 10 SOC analysts; developed 15 Tableau dashboards to identify patterns, and threats, effectively communicating insights to upper management.
- Collaborated with security and incident response teams to develop machine learning models, boosting threat detection and intelligence by 30% and enabling proactive identification of potential security risks.

SAP ABAP Developer   Jul 2019 – Aug 2022
Accenture   *Bengaluru, India*
- Configured new tenant databases and performed database administration using SAP HANA cockpit, while conducting SQL Trace performance tuning to identify bottlenecks, reducing query time by 40% and enhancing overall database performance.
- Delivered interactive SAP Fiori applications, enabling real-time insights & product performance monitoring for insight-driven decisions to 50+ stakeholders and subsequently improving customer experience for more than 1000 users.
- Migrated on-premises applications to SAP Cloud successfully, ensuring a 95% reduction in downtime and seamless transition.
- Resolved 100+ issues weekly using ServiceNow, improving application satisfaction, while proactively monitoring business processes and SAP system health to prevent downtime and enhance overall system availability.

PROJECTS

Text Summarization and Summary Detoxification - *Huggingface, transformers, trl, NLP*   [Link]
- Performed fine-tuning and hyperparameter tuning on Google's Flan-T5 base model for the SAMSUM dataset, incorporating training, regularization, and evaluation techniques to optimize summarization accuracy.
- Employed reinforcement learning techniques like feedback and rewards, and qualitative assessments like ROUGE score to measure 90% improvement in model behavior (in comparison to base model).

PDFBot - *Python, Chroma, LangChain, OpenAI*   [Link]
- Engineered a pipeline for document analysis and question-answering using LangChain and Google's Flan-T5 base, automating extraction of specific information from PDF documents.
- Leveraged Chroma vector databases, custom token splitting to optimize document indexing & retrieval, boosting efficiency.

Tesla Stock Analysis and Price Forecasting - *scikit-learn, scipy, yfinance, matplotlib*   [Link]
- Implemented hyperparameter tuning for XGBoost using RandomizedSearchCV, identifying the best parameters to minimize mean squared error (MSE) and enhance stock price forecasting.
- Applied GARCH (Generalized Autoregressive Conditional Heteroskedasticity) model for volatility modeling and stock price prediction, optimizing hyperparameters through numerical minimization techniques for time-series forecasting.

SKILLS

Programming Languages: Python, SQL, R, C++, JavaScript, HTML, CSS, Powershell, Bash
Data Science and Analytics: AI, NLP, ML, Excel, Tableau, PowerBI, Looker, Alteryx, Stata, SAS, MATLAB
Database and Cloud: MongoDB, MySQL, SQL Server, SAP Cloud, GCP, Azure, AWS
Software and Tools: TensorFlow, Pytorch, Git, Jira, Salesforces, Confluence, Agile, Scrum, Lean, CI/CD

EDUCATION

Master of Science, Computer Software Engineering   Sep 2022 – May 2024
Northeastern University, Boston, MA   *GPA: 3.7/4*
Bachelor of Technology, Computer Science   Sep 2015 – May 2019
SNDT Women's University, Mumbai, India   *CGPA: 8.5/10*

PUBLICATION(S)

- *Augmented Reality-Based Visual Dictionary for Elementary Students*, Springer ICSCN, 2019   [Link]