YOGESH ESHWAR PATIL

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SUMMARY

Senior AI/ML Engineer with 6+ years of hands-on experience building data-driven solutions at scale with a Master's in Computer Science from Cornell University. Specialized in NLP, Deep Learning, and MLOps with proven expertise in leading cross-functional teams and innovating end-to-end AI systems, from model research and development to production deployment and monitoring.

EXPERIENCE

Co-founder & ML Engineer, *R2Decide Inc* - Ithaca, NY, USA   Aug 2024 - Present
- Co-founded a startup to transform eCommerce with AI-driven discovery, personalized recommendations, and intent resolution
- Onboarded a leading jewelry brand and an espresso machine manufacturer as development partners for search and chat agents
- Improved search engagement rate by 54% by developing a hybrid vector search engine based on multimodal embeddings
- Reduced zero click sessions by generating AI-driven personalized sales guidance and query refinement suggestions for searches
- Enriched raw eCommerce product catalogs by designing a data enrichment pipeline on *llava-onevision-qwen2-72b-ov-hf* VLM
- Developed an AI sales agent assisting customers make complex purchase decisions through dynamic and conversational sales plans

Senior Artificial Intelligence Engineer, *Shell plc* - Bengaluru, KA, India   Nov 2022 - July 2023
- Developed and deployed deep learning models to forecast sulfur market prices, driving $4M in annual savings
- Enhanced prediction accuracy by 15% in volatile markets through feature engineering with Bollinger Bands and MACD indicators
- Secured negotiation advantages by optimizing neural network training for both short- and long-term sulfur price predictions
- Maintained model accuracy above 85% by implementing MLOps pipelines for continuous monitoring and retraining
- Provided real-time insights by creating API endpoints and integrating ML models into enterprise applications

Software Engineer – Data Analytics, *Shell plc* - Bengaluru, KA, India   Jan 2020 - Oct 2022
- Increased operational efficiency and resource allocation by 60% for 10,000+ resources through an enterprise analytics platform
- Engineered a resource allocation algorithm that smartly matched skills to project requirements, reducing costs by $250K annually
- Optimized manual effort by 40% by designing load balancing algorithm that automatically mapped resource request assignments
- Prevented 30% allocation gaps in upcoming year by forecasting project demand and resource availability with time-series models

Software Engineer – Data Migration, *Shell plc* - Bengaluru, KA, India   June 2017 - Dec 2019
- Led the unstructured data migration in $50B British Gas acquisition, designing a tool and resolving dependencies with data owners
- Built a unified data warehouse integrating 30M+ records from multiple enterprise sources for effective resourcing by 1,000+ managers

EDUCATION

Cornell University - Master of Engineering in Computer Science - **GPA: 3.6**   *Ithaca, NY, USA*
Relevant Coursework: Machine Learning, Natural Language Processing, Computer Vision, Robot Learning   Aug 2023 - May 2024

Ramaiah Institute of Technology - Bachelor of Engineering in Computer Science - **GPA: 4.0**   *Bengaluru, KA, India*

TECHNICAL SKILLS

Programming & Software Engineering:	Python, C++, Java, R; APIs & Microservices; Git, OOP, Design Patterns
ML & Deep Learning:	Supervised, Unsupervised, Reinforcement Learning, LSTM, Transformers
ML Frameworks:	PyTorch, TensorFlow, scikit-learn, XGBoost; spaCy, BERTopic
Generative AI & RAG:	Prompting, Fine-Tuning, Multimodal Embeddings, Vector Search, Re-rankers
Data Engineering & MLOps:	SQL/NoSQL, ETL, Hadoop, Spark; Docker, CI/CD, FastAPI, AWS, Azure
Leadership & Management:	Agile (Scrum), Stakeholder Engagement, Team Collaboration, Mentoring
Domain Expertise:	eCommerce, Energy, NLP, Search, Recommender Systems

PROJECTS

Performance of AutoML Frameworks in Noisy Environments, *Cornell University* - Ithaca, NY, USA   Aug 2023 - Dec 2023
- Researched the impact of noise on AutoML frameworks (AutoKeras, TPOT) by simulating Gaussian and random noise environments
- Demonstrated an 11.6% improvement in F1-score of AutoML frameworks by incorporating effective data cleaning strategies

Clone Advisor, *Cornell University* - Ithaca, NY, USA   June 2024 - July 2024
- Built a RAG-based support agent for a 5,000-member espresso community, offering expert coffee-making and troubleshooting advice
- Implemented social-score based document ranking model, boosting rankings for reputed authors based on posts and comments

PUBLICATION

Customer Churn Prediction for Retail Business, *ICECDS* - doi.org/10.1109/ICECDS.2017.8389557   Aug 2017
- Researched and modeled customer churn behavior leveraging transaction analysis and traditional machine learning algorithms