Coding MASTERS
Masters in Online Training

Real Time GENAI with AGENTICAI ENGINEERING

Why Choose us?

- Mock Interviews
- Resume Building
- 1:1 Career Mentorship
- Industry Ready Curriculum

+91-96669 56556 info@codingmasters.in codingmasters.in

ABOUT TRAINER

Subba Raju Sir

TRANSFORMING PROFESSIONALS INTO AI INNOVATORS

CERTIFICATIONS & CREDENTIALS

- Microsoft Certified Data Scientist & Co-pilot Engineer
- Google Certified Gen-AI Engineer
- Certified Pythonista Programmer
- Certified AI in Testing (ISTQB)
- Certified in GenAI & Agentic AI Engineering (Google, Microsoft, IITG)

SUBBA RAJU SIR

Withover 24years of ITexperienceand an M.Sc. in Computer Science from Manipal University, Subba Raju Sir is a leading trainer in Data Science, Prompt Engineering, LLMs, Generative AI, Agentic AI, and Autonomous Testing (AI). He emphasizes hands-on, industry-oriented learning that bridges the gap between academic concepts and real-world applications.

SPECIALTIES & EXPERTISE:

- DATA SCIENCE, AI, AND GENERATIVE AI
- PROMPT ENGINEERING & AGENTIC AI SOLUTIONS
- PYTHON PROGRAMMING & AI TESTING
- CORPORATE & ACADEMIC TRAINING (250+ HOURS COURSES)
- MENTORING PROFESSIONALS FOR CAREER GROWTH IN AI

Reviews

GenAI with AgenticAI Engineering

Satya Kiran

★★★★★

I enrolled in the GENAI with AgenticAI Engineering course at Coding Master, and it completely transformed my understanding of AI. Subba Raju sir explains even the toughest concepts in the simplest way. From real-time projects to hands-on tasks, every session felt practical and powerful. Truly the best place to master Generative AI!

Ashok Varma

★★★★★

If you're looking to build AI apps from scratch, this is the course! The AgenticAI modules were mind-blowing, and Subba Raju sir's teaching style made everything super clear. I started with basic knowledge, but now I can build advanced GenAI solutions. Highly recommended!

J Babunaik

★★★★★

The GENAI with AgenticAI Engineering course at Coding Master exceeded all my expectations. The curriculum is totally industry-oriented, the projects are practical, and the trainer is exceptional. Subba Raju sir gives personal attention to each student, making the learning journey smooth and enjoyable.

kanna varun1999

★★★★★

This course gave me the confidence to build my own AI tools. The hands-on labs, case studies, and real-world projects made learning easy and exciting. Thanks to Coding Master and especially Subba Raju sir, I now think and build like an AI engineer!

Module-1: CORE PYTHON CODING

- Why Python for DATA World?
- Introduction to Introduction
- Python Data Structure: Lists, Tuple, Set and Dictionary
- Python Control Structures.
- Python Functions and Methods
- Exceptions and Files
- Iterators, Decorators and Namespaces
- Practice Questions in Python and Mocks
- Live Mini Application implementation on BFSI Domains
- Python OOPs and Advanced Coding
- Set of coding questions for interviews.

Module-2: ADVANCED PYTHON CODING

1. NUMPY
2. PANDAS
3. SCIPY
4. MATPLOTLIB
5. SEABORN
6. Scikit-learn
7. Tensor Flow and Keras
8. PyTorch

MODULE-3: MATHEMATICS for Gen-AI and Agentic AI Engineering

1. Statistics
2. Probability
3. Linear Algebra
4. Calculus

MODULE 4: Machine Learning for Gen-AI and Agentic AI Engineering

1. Fundamentals of Machine Learning

- Definition of Machine Learning
- AI vs ML vs Deep Learning
- Types of Data (Structured, Unstructured, Semi-structured)
- Overfitting and Underfitting
- Bias-Variance Tradeoff
- Model Evaluation Basics
- Train/Test Split and Cross Validation

2. Advanced Foundations

- Regularization (L1, L2, Dropout, Early Stopping)
- Model Complexity and Generalization
- Feature Engineering and Feature Selection
- Handling Imbalanced Data (SMOTE, ADASYN)
- Hyperparameter Tuning (Grid Search, Random Search, Bayesian Optimization)
- Interpretability of Models
- Data Leakage and Prevention

3. Supervised Learning Algorithms

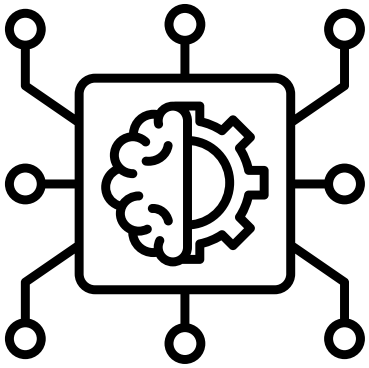
- Linear Regression – Cost Function, Gradient Descent
- Logistic Regression – Sigmoid Function, Decision Boundary
- Decision Trees – Entropy, Information Gain, Gini Index
- Random Forests – Bagging, Feature Importance
- Support Vector Machines (SVM) – Margins, Kernels
- Naive Bayes – Bayes Theorem, Assumptions
- K-Nearest Neighbors (KNN) – Distance Metrics, Choosing k
- Boosting Methods – AdaBoost, Gradient Boosting, XGBoost

MODULE 4: Machine Learning for Gen-AI and Agentic AI Engineering

4. Unsupervised Learning Algorithms

- Clustering – K-Means, Hierarchical, DBSCAN
- Dimensionality Reduction – PCA, LDA, t-SNE, UMAP
- Gaussian Mixture Models
- Association Rule Learning – Apriori, FP-Growth
- Anomaly Detection Techniques
- Applications of Unsupervised Learning (Market Basket Analysis, Customer Segmentation)

More Topics



- Ensemble Learning (Bagging, Boosting, Stacking)
- Transfer Learning
- Reinforcement Learning Basics (MDPs, Q-Learning)
- Federated Learning

MODULE-5: DEEP LEARNING for Gen-AI and Agentic AI Engineering

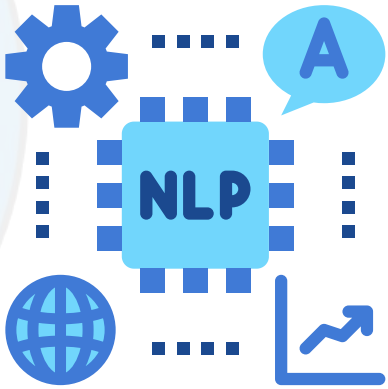
Part 1: Basics

1. Introduction to Machine Learning vs Deep Learning
2. Neural Networks Fundamentals
3. Perceptron and Multi-Layer Perceptron
4. Activation Functions (ReLU, Sigmoid, Tanh, Softmax)
5. Loss Functions (MSE, Cross-Entropy)
6. Gradient Descent and Backpropagation
7. Overfitting and Underfitting
8. Regularization (L1, L2, Dropout)
9. Optimization Algorithms (SGD, Momentum, RMSProp, Adam)
10. Evaluation Metrics (Accuracy, Precision, Recall, F1-Score)

Part 2: Intermediate

1. Convolutional Neural Networks (CNNs)
2. Pooling Layers and Feature Maps
3. Recurrent Neural Networks (RNNs)
4. Long Short-Term Memory (LSTM)
5. Gated Recurrent Units (GRUs)
6. Word Embeddings (Word2Vec, GloVe)
7. Sequence-to-Sequence Models
8. Attention Mechanisms
9. Transfer Learning
10. Data Augmentation Techniques

Part 3: Advanced



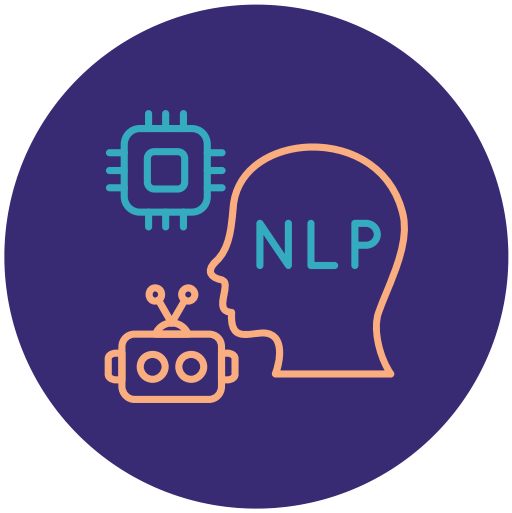
1. Generative Adversarial Networks (GANs)
2. Autoencoders and Variational Autoencoders (VAEs)
3. Transformers and Self-Attention
4. BERT, GPT, and Large Language Models
5. Reinforcement Learning with Deep Q-Networks
6. Policy Gradient Methods
7. Meta-Learning and Few-Shot Learning
8. Explainable AI in Deep Learning
9. Neural Architecture Search (NAS)
10. Ethics and Challenges in Deep Learning

MODULE-6:- Natural Language Processing (NLP) for Gen-AI and Agentic AI Engineering

Part 1: Basics

1. Introduction to Natural Language Processing
2. Text Preprocessing (Tokenization, Lemmatization, Stemming)
3. Stop Words and Vocabulary

4. Bag of Words Model
5. TF-IDF Representation
6. n-Grams and Language Models
7. Part-of-Speech Tagging
8. Named Entity Recognition (NER)
9. Syntactic Parsing
10. Word Embeddings Overview

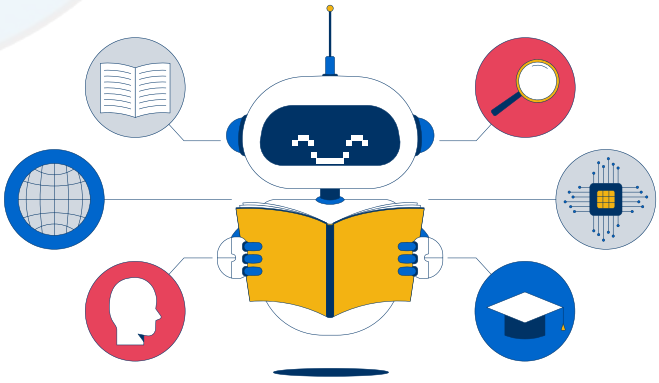


Part 2: Advanced

1. Distributional Semantics
2. Word2Vec: CBOW and Skip-gram
3. GloVe Embeddings
4. FastText Representations
5. Sequence Labeling Tasks
6. Text Classification Methods
7. Topic Modeling (LDA, NMF)
8. Sentiment Analysis Techniques
9. Machine Translation Basics
10. Speech Recognition Fundamentals

Part 3: Advanced

1. Contextualized Word Embeddings (ELMo)
2. Transformers in NLP
3. BERT Applications in NLP
4. GPT Applications in NLP
5. Summarization Techniques
6. Question Answering Systems
7. Dialogue Systems and Chatbots
8. Multilingual NLP
9. Low-Resource Language Processing
10. Ethical Challenges in NLP

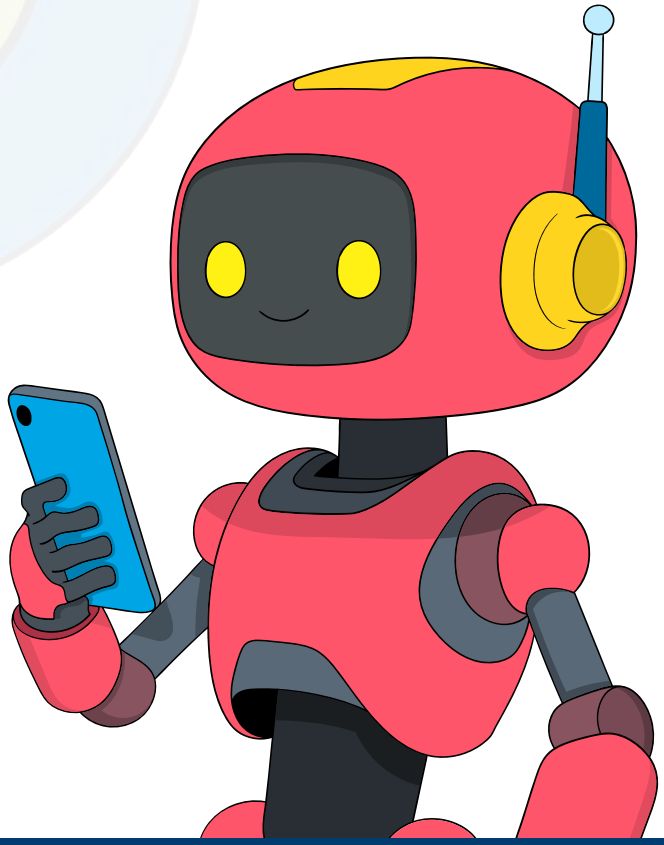


Module 7: Large Language Models (LLMs)

Part 1: Basics

1. Introduction to Language Models
2. Tokenization (BPE, WordPiece, SentencePiece)
3. Word Embeddings (Word2Vec, GloVe, FastText)
4. Contextual Embeddings (ELMo)
5. Recurrent Models in NLP (RNNs, LSTMs, GRUs)
6. Encoder-Decoder Architecture
7. Attention Mechanism
8. Transformer Basics
9. Pretraining vs Fine-tuning
10. Evaluation Metrics in NLP (BLEU, ROUGE, Perplexity)

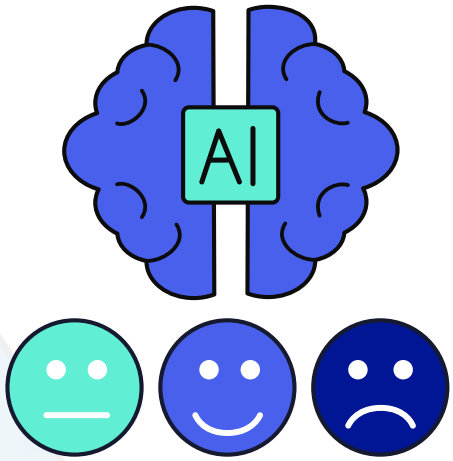
Part 2: Intermediate



1. BERT: Bidirectional Encoder Representations
2. GPT Series Overview
3. T5 and Text-to-Text Models
4. XLNet and Permutation-based Training
5. DistilBERT and Model Compression
6. Prompt Engineering Basics
7. Transfer Learning in NLP
8. Handling Long Contexts (Longformer, BigBird)
9. Masked Language Models
10. Causal Language Models

Part 3: Advanced

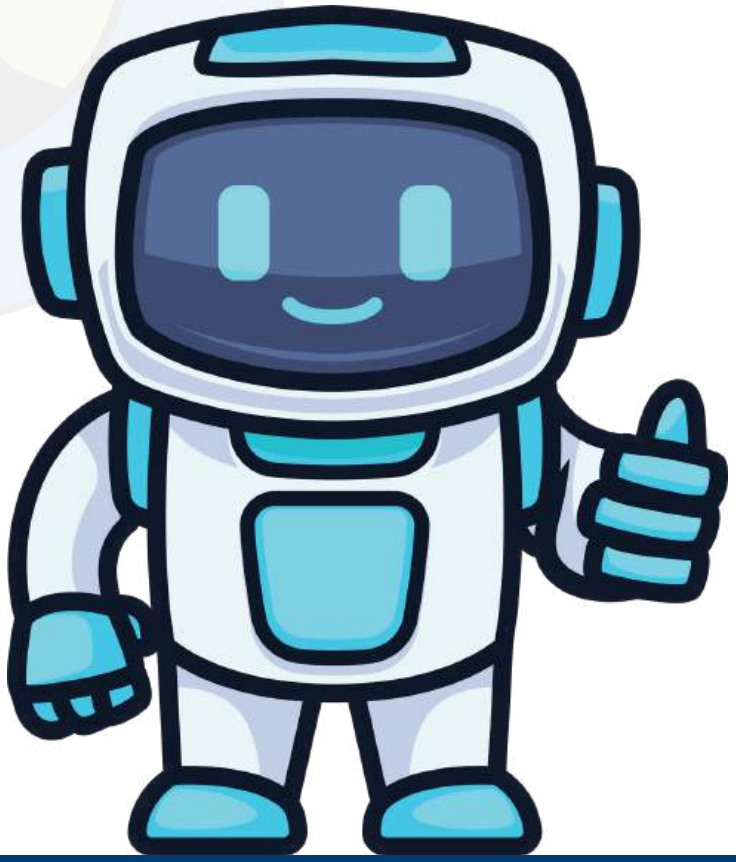
1. Instruction-tuned Models
2. Chain-of-Thought Reasoning
3. RLHF: Reinforcement Learning with Human Feedback
4. Parameter-Efficient Fine-tuning (LoRA, Prefix Tuning)
5. Scaling Laws in LLMs
6. Multimodal LLMs
7. Evaluation of LLM Capabilities
8. Bias, Fairness, and Ethics in LLMs
9. Efficient Inference Techniques
10. Future Directions of LLMs
11. Advanced Prompt Engineering



Module-8: Generative AI Concepts

Part 1: Basics

1. Introduction to Generative AI
2. Generative vs Discriminative Models
3. Basic Probability for Generative Models
4. Latent Variable Models
5. Variational Inference
6. Markov Chains
7. Monte Carlo Methods
8. GAN Fundamentals
9. Autoencoders Basics
10. Applications of Generative AI



Part 2: Intermediate

1. Variational Autoencoders (VAEs)
2. Conditional GANs
3. StyleGANs
4. Diffusion Models Basics
5. Generative Transformers
6. Text-to-Image Models (DALL·E, Stable Diffusion)
7. Text-to-Text Models
8. Evaluation of Generative Models (FID, IS)
9. Adversarial Training Techniques
10. Data Augmentation using Generative Models

Part 3: Advanced

1. Large Multimodal Models (LMMs)
2. Diffusion Models Advanced
3. Generative Audio Models
4. Video Generation with AI
5. 3D Object Generation
6. Ethics in Generative AI
7. Controllability in Generative AI
8. Personalized Content Generation
9. Generative AI in Healthcare and Science
10. Future of Generative AI

Part 4-Agentic-AI and Tools

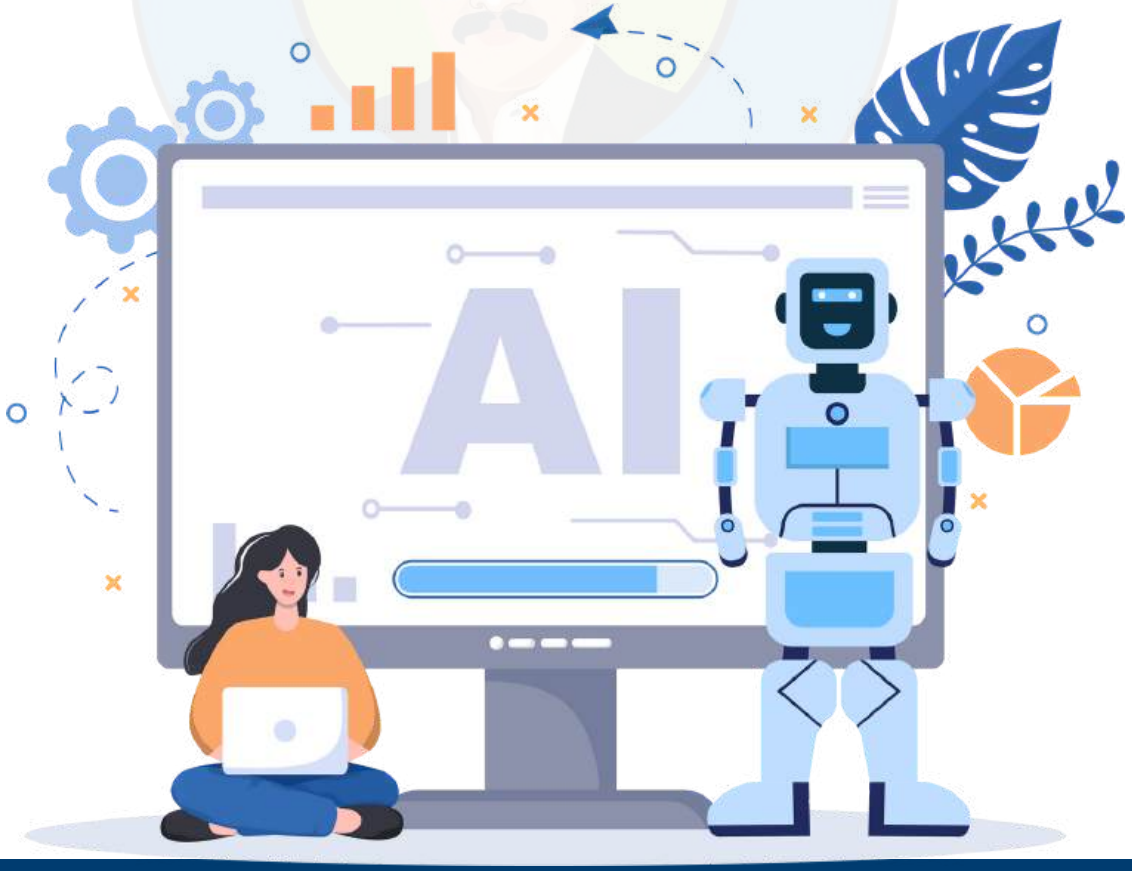
1. What is Agentic AI (vs generative AI, vs traditional AI)
2. Agentic-AI Frameworks Crew-AI, Open-AI, Langgraph
3. Understanding Agent Workflow
4. LLM API Integration
5. Multimodal Architecture
6. Evaluating llms

7. What is an AI tool?

- MCP Tools
- LLM Tool calls
- Agentic Tool Approach
- Project on MCP tools with AI Agents

Practical Training & Projects

1. Version Control: GIT & GITLAB for collaboration
2. Mini projects for each module to ensure foundational understanding
3. MLOps (Machine Learning Operations-Deployment-Pipelines)
4. Capstone AI/ML project simulating real-world challenges
5. AI and GenAI Testing Fundamentals
6. IEEE Research papers guide lines



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MODULE 9

Ready for job

Build a strong resume, practice interviews, and get placement support to kickstart your career confidently.

LEARN THE SKILLS BUILD REAL PROJECTS. GET INTERVIEW READY

- RESUME BUILDING
- MOCK INTERVIEWS
- Q&A SESSIONS
- HR INTERVIEW QUESTIONS
- PLACEMENT ASSISTANCE

Contact Us

Bhavya Krishna Residency,
Flat No: 404, OPP: Siddartha Degree College, Ameerpet Rd,Nagarjuna Nagar colony
Yella Reddy Guda,
HYDERABAD-500073

Phone Number:
+91-96669 56556

Website:
codingmasters.in

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Our Recent Placed Students

At **Coding Masters**, our faculty team comprises talented and experienced professionals with several decades of real-world industry experience. Our teaching style is tailored to meet **industry requirements**, ensuring no wasted effort or opportunity for learners. We are dedicated to empowering aspiring professionals with the skills they need to excel in the ever-evolving tech landscape. Known for offering the best **GENAI With AGENTICAI ENGINEERING training in Hyderabad**, Coding Masters blends innovation, hands-on learning, and industry
relevance.

Our mission is to bridge the gap between **academic knowledge and industry** expectations by providing high-quality training in **GENAI With AGENTICAI ENGINEERING** and more. Guided by experts like **Subba Raju Sir**, every student receives personalized mentorship and a transformative learning experience.