SKILL INTERN

ARTIFICIAL INTELLIGENCE

Designed for skill proficiency

PROGRAM HIGHLIGHITS

- **Basic-Advanced Level Training**
  By Experienced Mentors
- **Live & Recorded Lectures**
  At Your Flexible Schedule
- **Real Time Projects**
  Minor & Major Projects
- **Accredited certificates**
  Program approved ISO Certificate
- **Internships**
  Opportunities will be provided
- **Placement Guidance**
  Assistance from industrial EXPERTS

OUR MOTIVE

UPSKILL

Empowering Minds For Tomorrow

ENHANCE

Discover Your Next Ambition

MOTIVATE

Empowering Minds, Igniting Futures

ABOUT US

Skill Intern is a leading EdTech company dedicated to empowering engineering students with the skills and knowledge necessary to excel in today's competitive job market. Our mission is to bridge the gap between theoretical learning and practical application, enabling students to develop a strong foundation and enhance their employability.

Artificial Intelligence (AI) course from basic to advanced levels involves covering foundational concepts, programming, machine learning, deep learning, natural language processing, and other advanced AI topics. Here is a structured syllabus

WHY AI ?

- Automation of Tasks
- Enhanced Decision Making
- Personalization
- Innovation and Creativity
- Improved Accuracy and Precision
- Enhanced Customer Service
- Addressing Complex Problems
- Economic Growth and Opportunities
- Scalability
- Enhancing Human Capabilities

LEARNING PATH

- Introduction to Artificial Intelligence
- Fundamentals of AI
- AI Programming Basics
- Data Handling and Preprocessing
- Machine Learning Basics
- Advanced Machine Learning
- Neural Networks and Deep Learning
- Deep Learning Architectures
- Natural Language Processing (NLP)
- Reinforcement Learning
- AI in Practice
- AI Ethics and Future Trends

Module 1: Introduction to Artificial Intelligence

- Definition and History of AI
- AI vs. Human Intelligence
- AI Applications in Various Industries
- AI Ethics and Societal Impact

Module 2: Fundamentals of AI

- Basic Concepts and Terminology
- Intelligent Agents and Environments
- Problem Solving and Search Techniques
- Introduction to Knowledge Representation

Module 3: AI Programming Basics

- Introduction to Python for AI
- Python Libraries for AI (NumPy, Pandas, Matplotlib)
- Basic Programming Constructs (Loops, Conditionals, Functions)
- Introduction to Jupyter Notebooks

Module 4: Data Handling and Preprocessing

- Types of Data: Structured and Unstructured
- Data Collection and Cleaning
- Exploratory Data Analysis (EDA)

Feature Engineering and Selection

Module 5: Machine Learning Basics

- Introduction to Machine Learning
- Supervised vs. Unsupervised Learning
- Classification Algorithms (K-Nearest Neighbors, Decision Trees)
- Regression Algorithms (Linear Regression, Polynomial Regression)

Module 6: Advanced Machine Learning

- Ensemble Methods (Random Forest, Gradient Boosting)
- Clustering Algorithms (K-Means, Hierarchical Clustering)
- Dimensionality Reduction (PCA, LDA)
- Model Evaluation and Validation (Cross-Validation, ROC Curve)

Module 7: Neural Networks and Deep Learning

- Introduction to Neural Networks
- Perceptrons and Multi-Layer Perceptrons
- Backpropagation and Gradient Descent
- Introduction to Deep Learning Frameworks (TensorFlow, Keras)

Module 8: Deep Learning Architectures

- Convolutional Neural Networks (CNNs)
- Recurrent Neural Networks (RNNs)
- Long Short-Term Memory Networks (LSTMs)
- Autoencoders and Generative Adversarial Networks (GANs)

Module 9: Natural Language Processing (NLP)

- Introduction to NLP
- Text Preprocessing (Tokenization, Stemming, Lemmatization)
- Bag of Words and TF-IDF
- Advanced NLP Techniques (Word Embeddings, Transformers)

Module 10: Reinforcement Learning

- Introduction to Reinforcement Learning
- Markov Decision Processes
- Q-Learning and Deep Q-Networks (DQNs)
- Policy Gradient Methods

Module 11: AI in Practice

- AI in Computer Vision
- AI in Speech Recognition
- AI in Healthcare and Finance
- AI in Robotics

Module 12: AI Ethics and Future Trends

- Ethical Considerations in AI
- Bias and Fairness in AI
- Privacy and Security Concerns
- Future Trends in AI (AI in Edge Computing, Explainable AI)

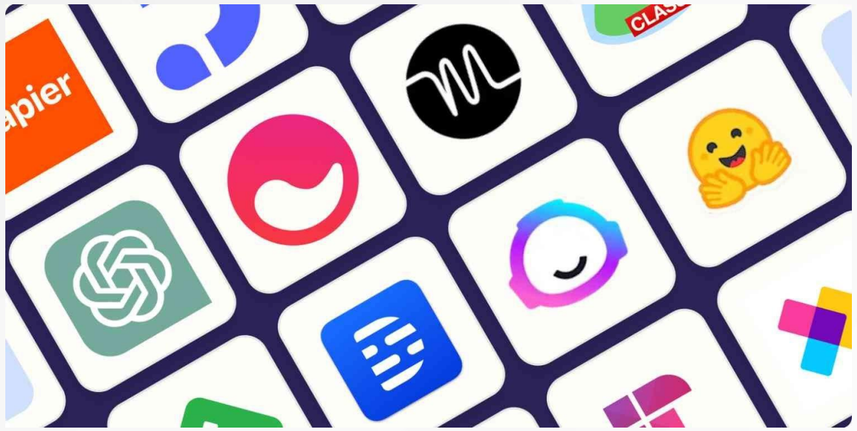
Assignments & Assessments

- Weekly assignments based on module topics
- Mid-term project: Wireframing and prototyping a small application
- Final project: Comprehensive Artificial Intelligence Project
- Participation in class discussions and activities

Recommended Reading

- "Artificial Intelligence: A Modern Approach" by Stuart Russell and Peter Norvig
- "Machine Learning Yearning" by Andrew Ng
- "Pattern Recognition and Machine Learning" by Christopher Bishop

TOOLS USED



AI TOOLS

ANACONDA

***In case of additional tools used, It will be discussed in live class**

CERTIFICATIONS

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THANK YOU

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