

# Mastery in Generative AI and Prompt Engineering for ChatGPT

Duration: 21 Hours

## Course Curriculum

### Module 1:

- Discovering ChatGPT: Conversing with the Future of Superintelligence
- Generative Artificial Intelligence: An Introduction
- ChatGPT: A Comprehensive Guide to Usage and Login Procedures
- Fostering Human-AI Partnerships: Unleashing Collaborative Potential
- ChatGPT Plus: Unveiling Enhanced Features and Capabilities

### Module 2:

- Optimizing ChatGPT Performance through Effective Prompt Design
- Introduction to Prompt Engineering: Understanding the Art of Guiding AI Responses
- Crafting Effective Prompts for Specific Tasks: A Practical Guide
- Leveraging ChatGPT Plugins to Enhance Prompting Capabilities
- Fine-Tuning Prompts for Optimal ChatGPT Performance
- Evaluating Prompt Effectiveness: Assessing the Quality of AI-Generated Responses

### Module 3:

- ChatGPT/Bard: Your Intelligent Assistant for Enhanced Productivity and Streamlined Workflows
- ChatGPT for Task Management and Prioritization
- ChatGPT for Research and Information Gathering
- ChatGPT for Content Creation and Editing
- ChatGPT for Communication and Collaboration
- ChatGPT for Personal Productivity and Well-being

### Hands-on:

- Automate meeting agendas and summaries, create and organize to-do lists and task reminders
- Conduct market research and competitor analysis, gather and summarize industry trends and news
- Generate creative marketing copy and social media posts, edit and proofread documents

- Draft emails and summarize meeting notes, translate documents and emails
- Manage personal schedules, appointments, and reminders, generate mindfulness exercises and stress-reduction techniques

### Case-studies:

- Case Study: Automating meeting agendas and summaries for a busy sales executive, Case Study: Creating and organizing to-do lists and task reminders for a project manager
- Case Study: Conducting market research and competitor analysis for a marketing team, Case Study: Gathering and summarizing industry trends and news for a financial analyst
- Case Study: Generating creative marketing copy and social media posts for a brand, Case Study: Editing and proofreading documents for a legal team
- Case Study: Drafting emails and summarizing meeting notes for a virtual team, Case Study: Translating documents and emails for cross-cultural collaboration
- Case Study: Managing personal schedules, appointments, and reminders, Case Study: Generating mindfulness exercises and stress-reduction techniques

### Module 4 :

- ChatGPT for Coders: Unleash AI-Powered Productivity and Efficiency
- ChatGPT for Automated Code Generation and Refactoring
- ChatGPT for Code Testing and Debugging
- ChatGPT for Code Documentation and Explanation
- ChatGPT for Code Search and Retrieval
- ChatGPT for Code Style and Formatting

### Hands-on:

- Generate repetitive code snippets, refactor existing code for better readability and efficiency
- Assist in identifying and fixing bugs, suggest potential test cases and scenarios
- Generate comprehensive documentation for code functions and classes, provide clear explanations of complex algorithms
- Efficiently search and retrieve relevant code snippets from large codebases, suggest similar code examples from online resources
- Adhere to consistent coding style guidelines, format code for improved readability and maintainability

**Case studies:**

- Case Study: Automating the generation of boilerplate code for a web development project
- Case Study: Utilizing ChatGPT to identify subtle bugs in a complex software application
- Case Study: Automating the creation of detailed documentation for a machine learning library
- Case Study: Utilizing ChatGPT to locate specific code segments for a legacy application
- Case Study: Enforcing consistent indentation and spacing conventions across a large codebase using ChatGPT

**Module 5:**

- Mastering ChatGPT Models: A Comprehensive Guide to Preprocessing, Fine-tuning, and API Integration
- Introduction to ChatGPT Models
- Introduction to ChatGPT API
- Building ChatGPT Applications with API
- Best Practices for ChatGPT API Usage
- Fine-tuning Principles and Objectives for ChatGPT Models

**Module 6:**

- ChatGPT-Powered Applications: A Practical Guide to Development and Integration
- Introduction to ChatGPT-Powered Applications
- Understanding ChatGPT API and Integration
- Building Chatbots with ChatGPT API
- Text Generation Applications with ChatGPT API
- Language Translation Applications with ChatGPT API
- Code Generation and Assistance with ChatGPT API
- Data Analysis and Insights Applications with ChatGPT API
- Integrating ChatGPT into Existing Applications
- Optimizing ChatGPT Performance for Applications
- Ethical Considerations for ChatGPT-Powered Applications
- Best Practices for Building and Deploying ChatGPT Applications
- Future Directions of ChatGPT-Powered Applications

### Module 7:

- Unveiling the Hidden Gems of Generative AI: Tools Beyond ChatGPT
- Hugging Face Transformers:
- Dall E
- Midjourney
- Tome
- Bard
- Bing