**📆 Weekly Plan (12 Weeks - Online)**

**🔰 Phase 1: Core Learning (Weeks 1–5)**

Focus: AI, ML, Python, Transformers, Django fundamentals

**🗓️ Week 1: Python Basics + Git**

* Python syntax, functions, OOP
* Git/GitHub basics, version control flow
* Small Git-based project with branches

**🗓️ Week 2: Advanced Python + Data Handling**

* List comprehensions, decorators, generators
* NumPy, Pandas, CSV/JSON parsing
* Mini-project: Data cleaner

**🗓️ Week 3: Introduction to AI + ML**

* What is AI, types of ML (supervised/unsupervised)
* Model workflow: train-test, accuracy, overfitting
* Scikit-learn mini classifier

**🗓️ Week 4: Transformers & HuggingFace**

* NLP concepts: tokenization, embeddings, LLMs
* HuggingFace model loading (pipeline, AutoModel)
* Mini-project: Sentiment classifier using transformers

**🗓️ Week 5: Django Basics**

* MVC (MVT) structure
* URL routing, views, templates
* Forms & basic model integration

**🛠️ Phase 2: Project Build (Weeks 6–10)**

**🗓️ Week 6: Project Kickoff + Model Integration**

* Create Django project + chatbot app
* Add HuggingFace model response in api\_views.py
* Test chat endpoint with postman/browser

**🗓️ Week 7: Memory System + DB Models**

* Create Session, Message, and Memory models
* Implement basic session context memory
* Store chat history in DB

**🗓️ Week 8: Chat Frontend UI (Templates + JS/HTMX)**

* Build sleek chat interface (chat bubbles, auto-scroll)
* Show user and assistant messages, typing animation
* Optional: React frontend prototype

**🗓️ Week 9: Ethical AI Layer + Testing**

* Add prompt filtering (abuse, privacy risks)
* Add unit tests for chatbot + model logic
* Add rate limiting or captcha

**🗓️ Week 10: Cloud Deployment**

* Prepare for deployment (env vars, gunicorn, whitenoise)
* Deploy to **Heroku**, **GCP**, or **Railway**
* Share live demo links

**🎤 Phase 3: Finalization (Weeks 11–12)**

**🗓️ Week 11: Feedback Loop & Improvements**

* Let peers/users test the chatbot
* Collect UI/UX feedback
* Bug fixes + enhancements

**🗓️ Week 12: Final Presentation + Documentation**

* Final GitHub repo with README, screenshots
* Architecture diagram, model details, flow
* Live demo + team presentation