**Web Scraping Course Structure (Basic to Advance)**

-Sammy

Welcome to the "Complete Web Scraping Mastery" course! Below is your structured learning path from basic to advanced concepts with hands-on projects.

## Module 1: Fundamentals of Web Scraping

* What is web scraping? (Legal/ethical considerations)
* How websites are structured (HTML/CSS/JS basics)
* HTTP protocols and requests (GET/POST)
* Python prerequisites (Review of requests, BeautifulSoup basics)
* Project 1: Simple quote scraper (static site)

## Module 2: Core Scraping Techniques

* BeautifulSoup deep dive (find, find\_all, select)
* Handling different HTML elements (tables, lists, forms)
* Pagination and multi-page scraping
* Data cleaning and storage (CSV, JSON)
* Project 2: E-commerce product scraper

## Module 3: Dynamic Content Handling

* Limitations of BeautifulSoup
* Introduction to Selenium
* Waiting strategies (implicit/explicit waits)
* Handling JavaScript-rendered content
* Project 3: Social media trend scraper

## Module 4: Advanced Scraping Concepts

* Scrapy framework overview
* Building spiders and pipelines
* Middlewares and extensions
* Distributed crawling
* Project 4: News article crawler (Scrapy)

## Module 5: Production-Grade Scraping

* Rotating user agents and proxies
* CAPTCHA handling strategies
* Rate limiting and politeness policies
* Scraping APIs directly
* Project 5: Large-scale job listings scraper

## Module 6: Specialized Scraping

* Image scraping and processing
* PDF/Excel data extraction
* Headless browsing techniques
* Scraping authenticated sessions
* Project 6: Automated report generator

## Module 7: Deployment & Maintenance

* Scheduling scrapers (APScheduler)
* Error handling and logging
* Monitoring and alerts
* Cloud deployment (AWS Lambda, Scrapyd)
* Project 7: Deployed price monitoring system

## Final Projects

1. Comprehensive real estate data aggregator

2. Automated stock market data collector

3. Custom search engine scraper API

4. AI training data collector

Would you like me to:

1. Begin with Module 1 fundamentals

2. Jump to a specific module

3. Get project ideas with detailed requirements

4. See the complete curriculum with timeline

[Enter your choice 1-4]: