

ENTERPRISE PROGRAM BRIEF

Python, APIs and Git for AI Engineering

Build and test a small Python API client under version control.

VNode ITeS

F02

DURATION
40 hours

LEVEL
Foundation

FORMAT
Private cohort

AUDIENCE PROFILE

Built for these roles

Technical professionals entering AI development

OVERVIEW

Executive overview

Build and test a small Python API client under version control. Proposed instructor-led duration; delivery subject to environment and lab validation.

READINESS

Prerequisites

- Basic technical literacy
- First-time programmers require additional independent practice

PROGRAM OUTCOMES

Capabilities your teams will gain

- Implement a typed and validated Python API client
- Demonstrate pagination, timeout, invalid-input and retry tests
- Protect credentials and handle permission failures explicitly
- Provide a clean setup, Git history and understandable execution guide

ENTERPRISE CUSTOMIZATION

Enterprise customization

Tailor this program to your organization's priorities: Build and test a small Python API client under version control.

- Private cohort scheduling
- Equivalent-experience entry review

CURRICULUM

Curriculum roadmap

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MODULE 1 · 8 HOURS

Python programming essentials

Transform a request dataset and handle missing or invalid values.

- Types and collections
- Conditions and loops
- Functions
- Exceptions and debugging

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MODULE 2 · 8 HOURS

Working with data and project environments

Create a reproducible project that reads and validates JSON inputs.

- JSON and files
- Packages and virtual environments
- Configuration
- Type hints and logging

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MODULE 3 · 8 HOURS

HTTP and API integration

Build a client against an instructor-provided local mock service.

- REST methods
- Status codes
- Pagination
- Timeouts and bounded retries

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MODULE 4 · 8 HOURS

Authentication, tests and Git

Test the API client without live credentials and review a change in Git.

- Tokens and OAuth concepts
- Secrets outside source
- Unit tests and mocks
- Branches and pull requests

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MODULE 5 · 8 HOURS

Integration project and review

Deliver a command-line client with tests, setup instructions and known limitations.

- Project structure
- Input contracts
- Error reporting
- Documentation and cleanup

PREPARATION

Environment prerequisites

Supported Python version and isolated package environment Git and code editor Local mock API and synthetic data; optional approved model endpoint Delivery depends on environment and lab validation. This outline does not include step-by-step lab instructions.

CAPSTONE

Capstone

Deliver a command-line client with tests, setup instructions and known limitations. Assessed Python API client repository Evidence of relevant access, quality and risk controls Demonstration and limitations record

ASSESSMENT

Assessment

Scenario-based practical assessment Implement a typed and validated Python API client 30% Demonstrate pagination, timeout, invalid-input and retry tests 25% Protect credentials and handle permission failures explicitly 25% Provide a clean setup, Git history and understandable execution guide 20% Proposed VNode outline-level assessment; no vendor accreditation or completed lab validation implied.

DELIVERABLES

Participant deliverables

- Assessed Python API client repository
- Evidence of relevant access, quality and risk controls
- Demonstration and limitations record

SCOPE

Scope boundaries

Step-by-step lab instructions; Runnable solution code; Packaged source datasets; Executed environment validation

DELIVERY

Delivery options

Count teaching hours, not calendar days. Exclude breaks. Split into 4-hour or 8-hour teaching sessions; schedule complex project work in contiguous blocks. Proposed hours exclude breaks and are subject to pilot validation.

PRIVATE DELIVERY

Plan a private cohort for your team

Scope delivery format, role mix, and rollout timeline with our solutions team.

[Plan Private Delivery](#)
[Book advisory call](#)