

Senior Python Developer – Legacy Systems Refactoring

Northbridge Global Solutions (NGS) – Technology Division

Location: Hybrid – New York, NY (2–3 days onsite) · Type: Full-time · Team: Enterprise Platforms

PYTHON

LEGACY MODERNIZATION

REFACTORING

ENTERPRISE SYSTEMS

About Northbridge Global Solutions

Northbridge Global Solutions (NGS) is a Fortune 500 enterprise technology partner serving clients in finance, healthcare, and logistics across 40+ countries. Our Technology Division builds and maintains high-availability platforms that process millions of transactions each day.

We are investing heavily in modernizing core systems and are looking for an experienced Python developer to take ownership of a critical legacy platform, stabilize it, and lead its evolution.

Role Overview

We are seeking a **Senior Python Developer** with significant experience working on large, established codebases. In this role, you will take over an existing, business-critical legacy application, refactor and improve it for maintainability and performance, and gradually introduce modern patterns and tooling.

You will collaborate closely with product owners, business analysts, QA, and infrastructure teams to ensure the system remains stable while you improve its architecture and code quality.

Key focus areas:

- Deep dive into an existing Python legacy codebase and quickly become the subject-matter expert.
- Refactor and modularize code while keeping behavior stable and well tested.
- Modernize tooling, deployment pipelines, and observability around the system.

Responsibilities

- Own the full lifecycle of a legacy Python application used across multiple business units.
- Analyze, refactor, and simplify complex, tightly coupled modules into maintainable components.
- Improve code quality through test coverage, static analysis, and documentation.
- Identify and address performance bottlenecks, memory issues, and reliability concerns.
- Design and implement APIs and integration points with downstream and upstream systems.
- Collaborate with architects to plan incremental modernization (e.g., service extraction, redesign of core flows).
- Work with QA to define test strategies for legacy behavior and regression prevention.
- Provide technical guidance and code reviews to other developers contributing to the system.
- Participate in incident reviews and root-cause analysis; implement preventative improvements.
- Contribute to CI/CD pipeline enhancements, environment configuration, and deployment automation.

Required Qualifications

- **6+ years of professional software development experience**, primarily with Python.
- Proven experience working on and improving **large, legacy or brownfield codebases**.
- Strong proficiency in core Python (data structures, OOP, error handling, packaging, virtual environments).
- Experience with at least one major Python web or backend framework (e.g., Django , Flask , FastAPI).
- Solid understanding of relational databases (e.g., PostgreSQL, MySQL, or Oracle) and writing efficient SQL.
- Hands-on experience with unit testing and integration testing (e.g., pytest , unittest).
- Familiarity with Linux environments and basic shell scripting for debugging and maintenance.
- Experience in version control with Git and standard workflows (pull requests, code reviews, branching strategies).
- Ability to read, reason about, and safely change unfamiliar or poorly documented code.
- Strong communication skills and the ability to work cross-functionally with non-technical stakeholders.

Nice to Have

- **Java 6 experience** or exposure to older Java ecosystems and build tools (e.g., Ant, Maven). Several surrounding services and utilities are implemented in Java 6; being able to read and adjust this code is a significant plus.
- Some front-end experience with **HTML** and **vanilla JavaScript** (no frameworks required).

The system exposes a basic web UI; comfort making small UI fixes and enhancements is a huge plus.

- Experience modernizing monolithic applications into smaller services or layered architectures.
- Familiarity with RESTful API design and integrating with third-party services.
- Experience with message queues or asynchronous processing (e.g., RabbitMQ, Kafka, Celery).
- Knowledge of CI/CD tools (e.g., Jenkins, GitLab CI, GitHub Actions) and artifact management.
- Exposure to containerization and orchestration (e.g., Docker, Kubernetes) in an enterprise environment.
- Background working in regulated industries (finance, healthcare, insurance) or other compliance-heavy domains.

What We're Looking For

- A pragmatic engineer who balances code quality with delivery and risk management.
- Someone comfortable taking ownership of an existing system rather than building only "greenfield" projects.
- An engineer who can write clear documentation and transfer knowledge to other team members.
- A person who is patient with legacy constraints but creative about incremental improvements.

Our Tech Environment

- Python 3.x, with some legacy Python 2.x components being retired.
- Mix of Django and Flask-based services; legacy WSGI applications.
- PostgreSQL and Oracle databases; Redis for caching where appropriate.
- Git-based workflows; Jira and Confluence for work tracking and documentation.
- Jenkins-driven CI/CD pipelines with automated testing and deployments.
- Hybrid on-prem and cloud infrastructure (AWS) as part of an ongoing migration.

Benefits & Perks

- Competitive base salary and annual performance bonus.
- Comprehensive health, dental, and vision coverage starting day one.
- 401(k) with company match.
- Generous paid time off, plus company holidays and volunteer days.
- Professional development budget for conferences, courses, and certifications.
- Hybrid work model with flexible hours and modern office space in midtown Manhattan.

Ready to take ownership of a critical legacy system and make a measurable impact?

Send your resume and a brief description of a legacy project you've improved or refactored.

Apply Now

Northbridge Global Solutions is an equal opportunity employer. We celebrate diversity and are committed to creating an inclusive environment for all employees.