

Vasile Bratu

Senior Python & Web Automation Engineer | Web Scraping & API Specialist

GitHub: github.com/amendamax | Upwork Verified Freelancer

Executive Summary

Senior Python Engineer with 6+ years of specialized experience in building complex, stateful web scraping systems, interactive portal automation, and resilient data extraction pipelines. Proven track record in bypassing modern anti-bot protections (Cloudflare, DataDome, 2FA workflows), session state management, and delivering clean, executive-ready Excel/DB datasets.

Core Technical Capabilities

Category	Technologies & Architecture
Browser Automation	Python 3.11+, Playwright Async, Selenium, Playwright-Stealth, Puppeteer
Session & 2FA Handling	StorageState JSON, Cookie Persistence, SMS API / Webhook 2FA Capturers
Fault-Tolerance & Checkpoints	SQLite / JSON Checkpoint Engines, Resumable Scraping, Auto-Reauth
Backend & Data Pipelines	FastAPI, PostgreSQL, SQLAlchemy, AWS S3 Vault, Pydantic, REST APIs
Executive Data Export	OpenPyXL (Styled Excel Reports), Pandas, CSV, JSON, Google Sheets API

Featured Case Studies & Architectural Solutions

1. Stateful Interactive Portal Scraper & SMS 2FA Engine

- **Challenge:** Extracting structured multi-popup data from authenticated interactive web portals requiring occasional SMS 2FA.
- **Solution:** Built an asynchronous Playwright Python pipeline using persistent storage state. Integrated an SMS webhook API to capture 2FA tokens on the fly without human intervention.
- **Fault Tolerance:** Implemented a local SQLite checkpoint engine to log progress per record. The scraper automatically recovers from network disconnects and resumes execution seamlessly.

2. Enterprise B2B Lead Scraping & Verification Suite

- **Challenge:** Harvesting fresh, verified business lead records across global directories while maintaining low bounce rates.
- **Solution:** Developed multi-source Python extractors with Playwright stealth, automated email syntax and SMTP ping verification, exporting deduplicated, styled Excel workbooks via OpenPyXL.

3. FastAPI Backend & S3 Document Vault Microservice

- **Challenge:** Building a high-speed async backend for user ingestion, secure S3 file storage, and AI LLM chat sessions.
- **Solution:** Engineered a modular FastAPI application with OAuth2/JWT authentication, PostgreSQL persistence, and pre-signed S3 URLs.

4. Asynchronous AI Quantitative Trading Fleet & Options Engine

- **Challenge:** Deploying and managing a diversified portfolio of 8 automated trading engines with real-time execution across crypto, indices, forex, and stocks, while maintaining strict drawdown caps and zero API latency.
- **Solution:** Developed a robust VPS-hosted Python infrastructure running Machine Learning Ensemble models (XGBoost & LightGBM), dynamic trend-alignment filters, and a secure Options writing engine (Bull Put spreads with VIX-adaptive Delta and 21-DTE Gamma Risk Shields). Monitored by a central watchdog scheduler and risk sentinel.
- **Results:** Achieved diversified market exposure with 0 active execution errors, 89.4% win rate on index/stock option spreads, and maximum drawdown kept strictly under 5% across backtests.
- **Architecture & Documentation:** github.com/amendamax/ai-quantitative-trading-fleet

Technical Publications & Open Source

- **How to Build Executive-Ready Excel Reports Directly in Python Using OpenPyXL** (Published Engineering Article)
- **Ethical Web Scraping & GDPR Compliance for Enterprise Data Extraction** (Published Engineering Article)
- **GitHub Open Source Repositories:** github.com/amendamax