**Architecture Mapping (C# → Python)**

| **C# Component** | **Python Equivalent** |
| --- | --- |
| ML.NET | scikit-learn, XGBoost, or TensorFlow |
| Razor Pages (.cshtml) | Jinja2 templates (Flask) |
| Dependency Injection | Flask/ FastAPI dependency overrides |
| Session/TempData | Flask sessions or server-side cache |
| IFormFile | werkzeug.datastructures.FileStorage |
| Xceed.DocX + PdfPig | python-docx + pdfplumber |

**Suggested Python Stack**

* **Modeling**: pandas, scikit-learn, joblib, numpy
* **Text Parsing**: python-docx, pdfplumber, re
* **Web App**: Flask, Bootstrap, Jinja2, Flask-Session
* **Testing**: pytest, unittest, coverage

**Side-by-Side Comparison**

| **Metric** | **C# Version** | **Python Version** |
| --- | --- | --- |
| Model Accuracy | FastTree regression | RandomForest/XGBoost |
| Developer Productivity | Visual Studio | VSCode |
| Web Performance | ASP.NET Core | Flask/FastAPI |
| File Handling | Built-in libs + Xceed | More flexible, open-source |
| Testing Tool | xUnit | Pytest |