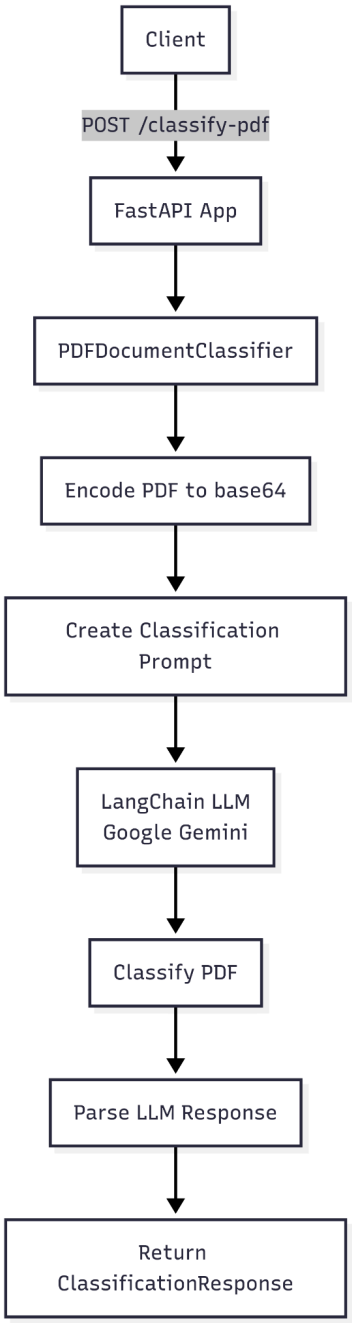
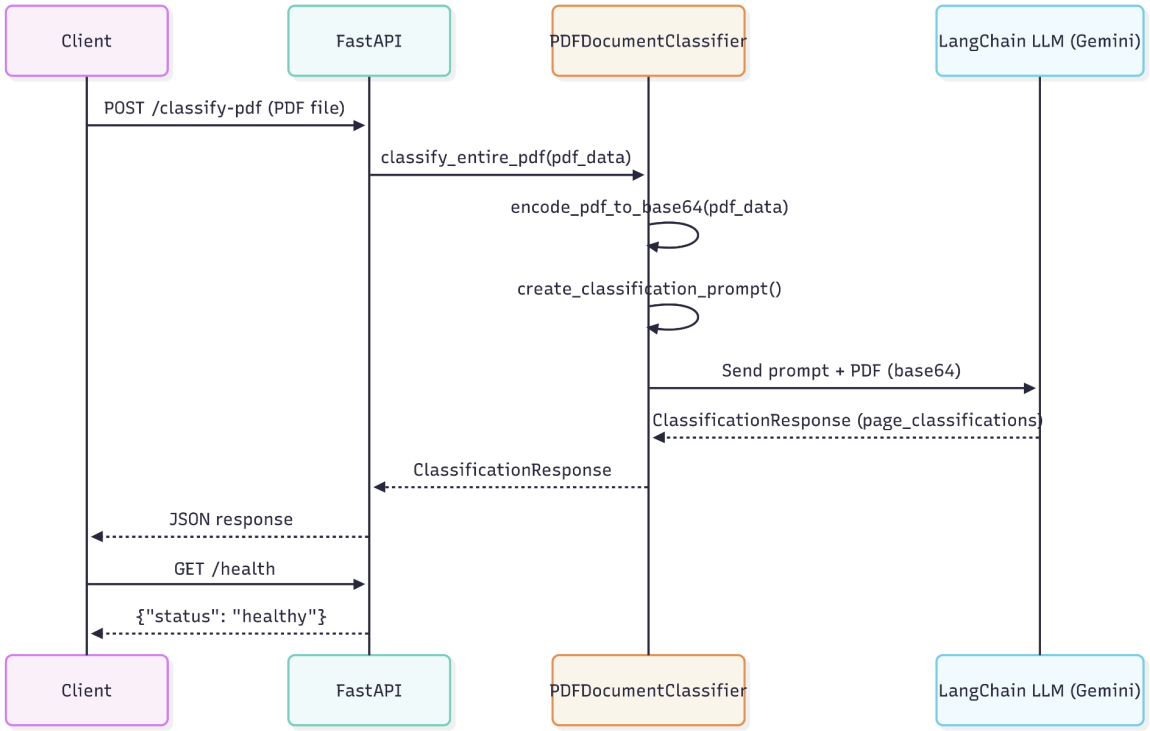
PDF Document Classifier API

Architecture Diagram



Request Flow Diagram



Base URL

http://localhost:8000

Endpoints

Health Check

GET /health

Returns the health status of the API service.
Parameters: None

Example Request:
curl -X GET http://localhost:8000/health

Example Response:
{
  "status": "healthy"
}

Status Codes:

- 200 OK - Service is healthy

Document Classification

POST /classify-pdf

Content-Type: multipart/form-data

Parameters:

Parameter	Type	Required	Description
file	File	Yes	PDF file to classify (multipart/form-data)

Example Request:

```
curl -X POST http://localhost:8000/classify-pdf \
  -F "file=@/path/to/document.pdf"
```

Example Response:


```
{
  "page_classifications": [
    {
      "page": 1,
      "document_type": "Aadhaar Card",
      "confidence": 0.95,
      "reasoning": "Page contains Aadhaar card layout with UIDAI logo, 12-digit Aadhaar number format, and standard government ID design elements."
    },
    {
      "page": 2,
      "document_type": "PAN Card",
      "confidence": 0.92,
      "reasoning": "Page shows PAN card format with Income Tax Department logo, 10-character PAN number pattern, and official government card layout."
    },
    {
      "page": 3,
      "document_type": "Bank Statement",
      "confidence": 0.88,
      "reasoning": "Page contains bank statement format with account details, transaction history, and bank letterhead with official branding."
    }
  ]
}
```

Status Codes:

- 200 OK - Classification completed successfully
- 400 Bad Request - Invalid file type (non-PDF file)
- 422 Unprocessable Entity - Missing required parameters
- 500 Internal Server Error - Server-side processing errors

Error Responses

Invalid File Type

Example Request:

```
curl -X POST http://localhost:8000/classify-pdf \
  -F "file=@/path/to/document.txt"
```

Response:

```
{
  "detail": "File must be a PDF"
}
```

Status Code: 400 Bad Request

Missing File Parameter

Example Request:

```
curl -X POST http://localhost:8000/classify-pdf
```

Response:

```
{
  "detail": [
    {
      "type": "missing",
      "loc": ["body", "file"],
      "msg": "Field required",
      "input": null
    }
  ]
}
```

Status Code: 422 Unprocessable Entity

Processing Error

Response:

```
{
  "detail": "Error processing PDF: [specific error message]"
}
```

Status Code: 500 Internal Server Error

Response Schema

Successful Classification Response

```
{
  "page_classifications": [
    {
      "page": "number",          // Page number (1-based)
      "document_type": "string",  // Identified document type
      "confidence": "number",     // Confidence score between 0 and 1
      "reasoning": "string"       // Explanation for the classification
    }
  ]
}
```

Health Response

```
{
  "status": "string"  // Healthy status of the service
}
```

Error Response

```
{
  "detail": "string"  // Error message
}
```

Validation Error Response

```
{
  "detail": [
    {
      "type": "string",    // Error type
      "loc": ["array"],    // Location of the error
      "msg": "string",     // Error message
      "input": "any"       // Input that caused the error
    }
  ]
}
```