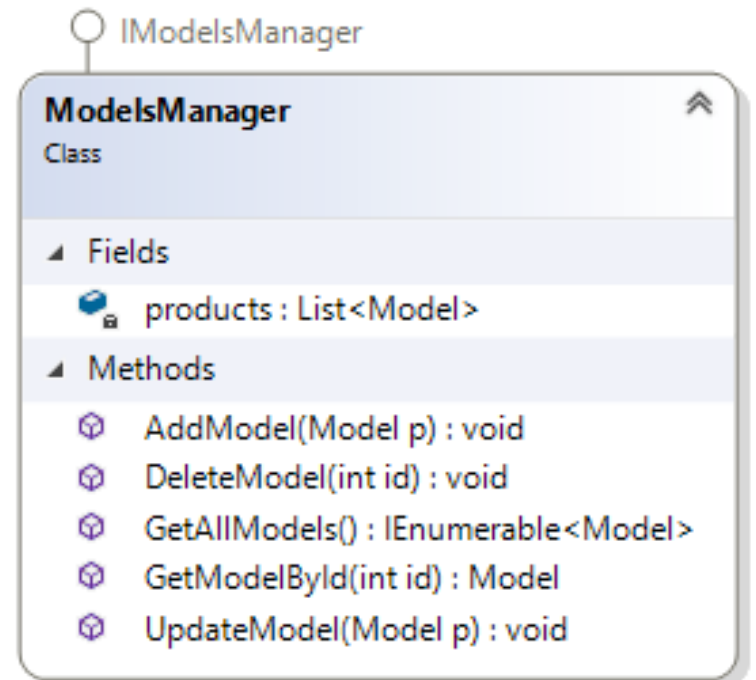
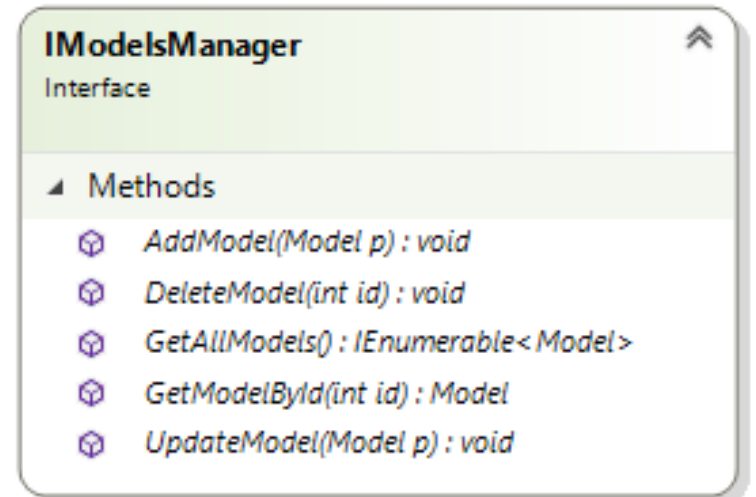
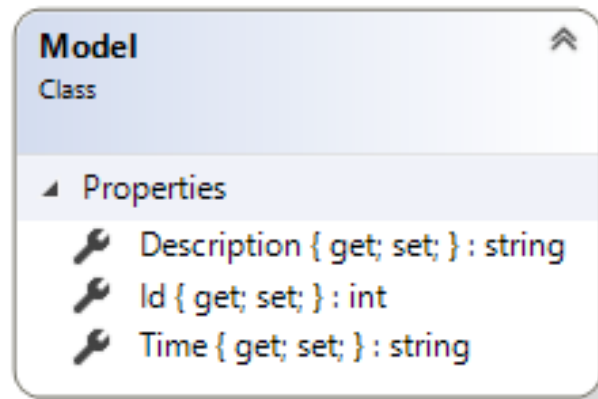


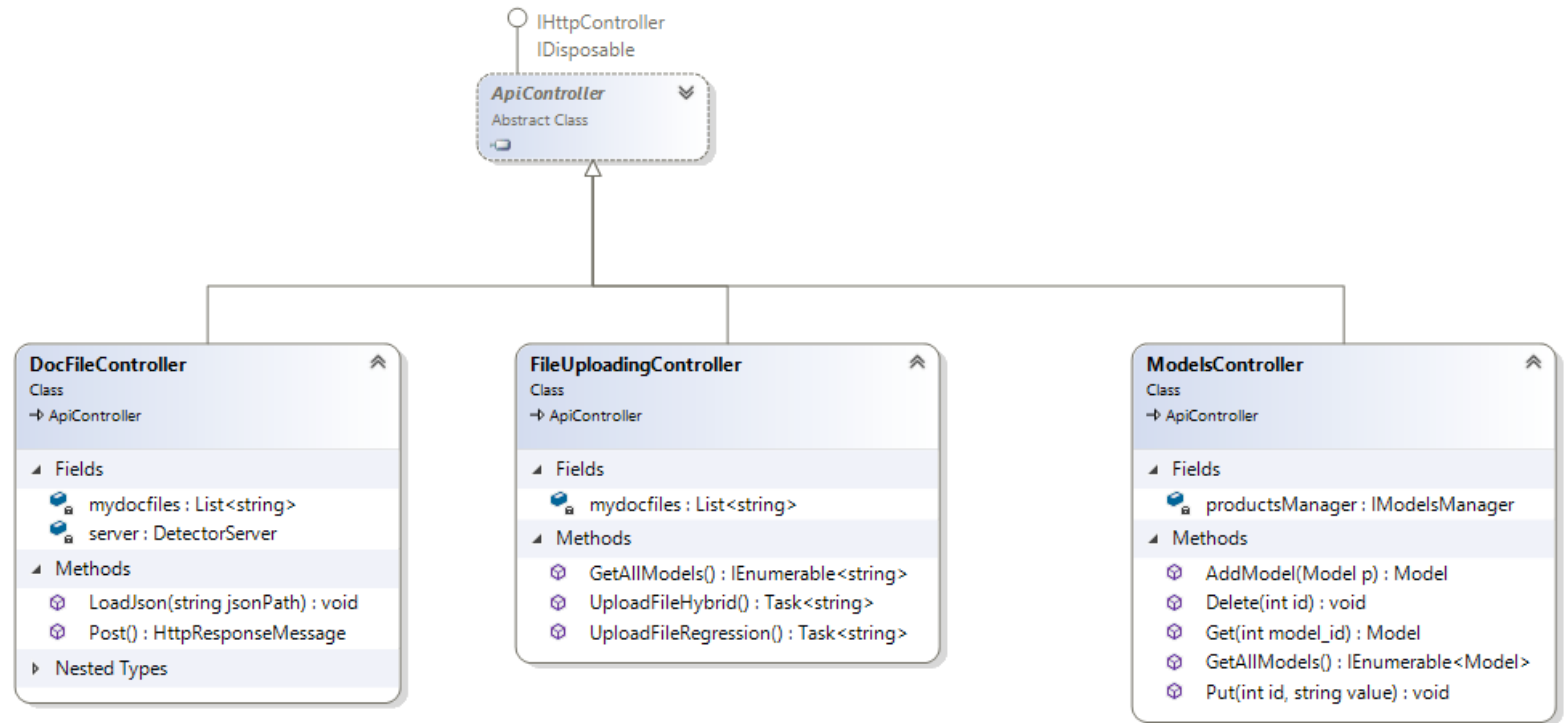
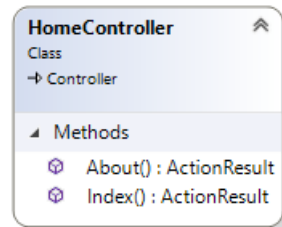
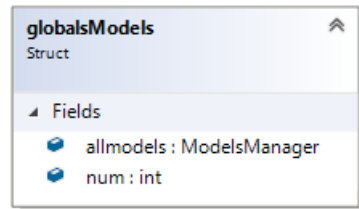
UML Diagram

Anomaly Detection Server

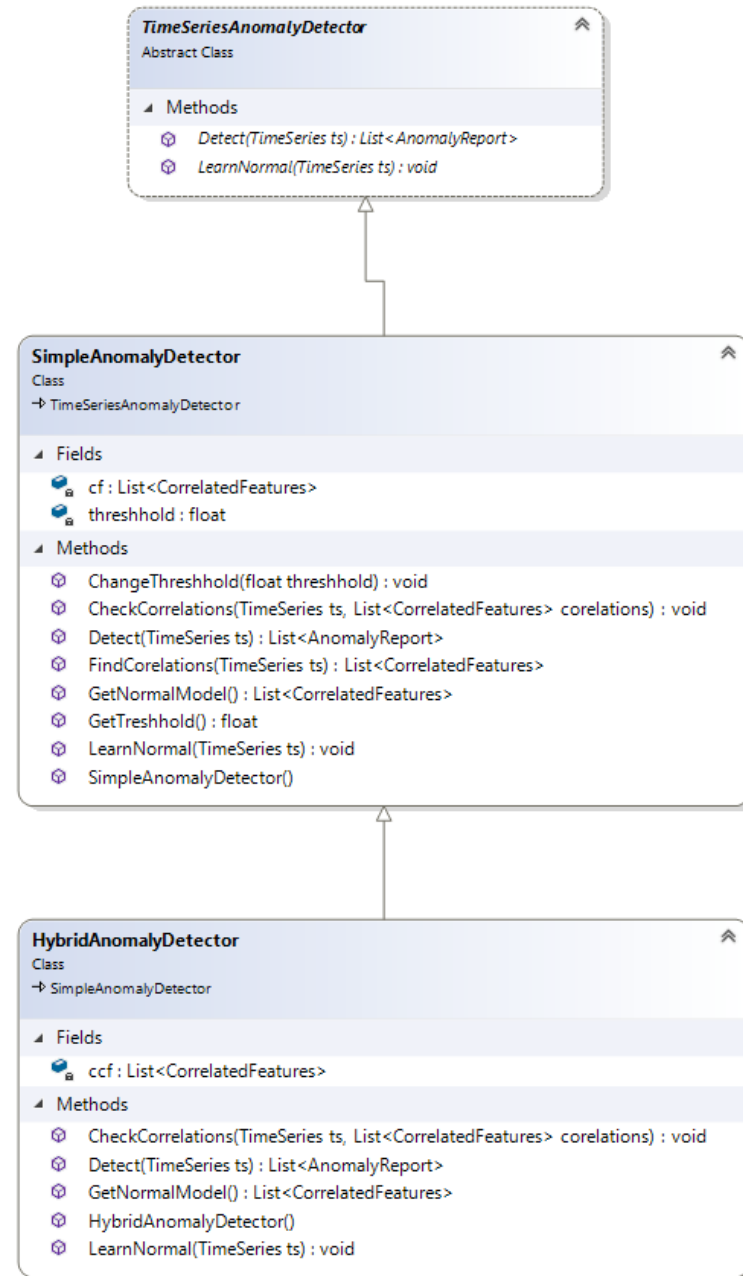
Model



controller



Server - Part One



Server – Part Two

DetectionUtil
Class

Methods

- Avg(float[] x, int size) : float
- Cov(float[] x, float[] y, int size) : float
- Dev(Point p, Line l) : float
- Dev(Point p, Point[] points, int size) : float
- Linear_reg(Point[] points, int size) : Line
- Pearson(float[] x, float[] y, int size) : float
- Var(float[] x, int size) : float

AnomalyReport
Class

Properties

- description { get; set; } : string
- timeStep { get; set; } : long

Methods

Line
Class

Fields

- a : float
- b : float

Methods

- f(float x) : float
- Line()
- Line(float a, float b)

Circle
Class

Fields

- center : Point
- radius : float

Methods

- Circle()
- Circle(Point c, float r)
- distance(Point p) : float

Point
Class

Fields

- x : float
- y : float

Methods

- Point(float x, float y)

DetectorServer
Class

Fields

- detector : TimeSeriesAnomalyDetector
- pathToSave : string
- reports : List<AnomalyReport>
- test : TimeSeries
- train : TimeSeries

Methods

- DetectorServer(string csvTrain, string csvTest, string type, string path)
- PrintReports() : void
- Serialize() : void

TimeSeries
Class

Fields

- db : Dictionary<float, List<float>>
- titles : List<string>

Methods

- data_by_time(float timestep) : List<float>
- get_data_by_categories() : List<List<float>>
- get_time_vector() : List<float>
- number_by_title(string str) : int
- print() : void
- TimeSeries(string CSVfileName)
- title_by_number(int num) : string

CorrelatedFeatures
Class

Fields

- circle : Circle
- correlation : float
- feature1 : string
- feature2 : string
- lin_reg : Line
- threshold : float

Methods

- CorrelatedFeatures()

MinCircleUtil
Class

Methods

- Distance(Point p1, Point p2) : float
- FindMinCircle(List<Point> points, List<Point> R) : Circle
- FindMinCircle(Point[] points, int size) : Circle
- Is_in_circle(Point point, Circle circle) : bool
- Trivial_circle(List<Point> R) : Circle