

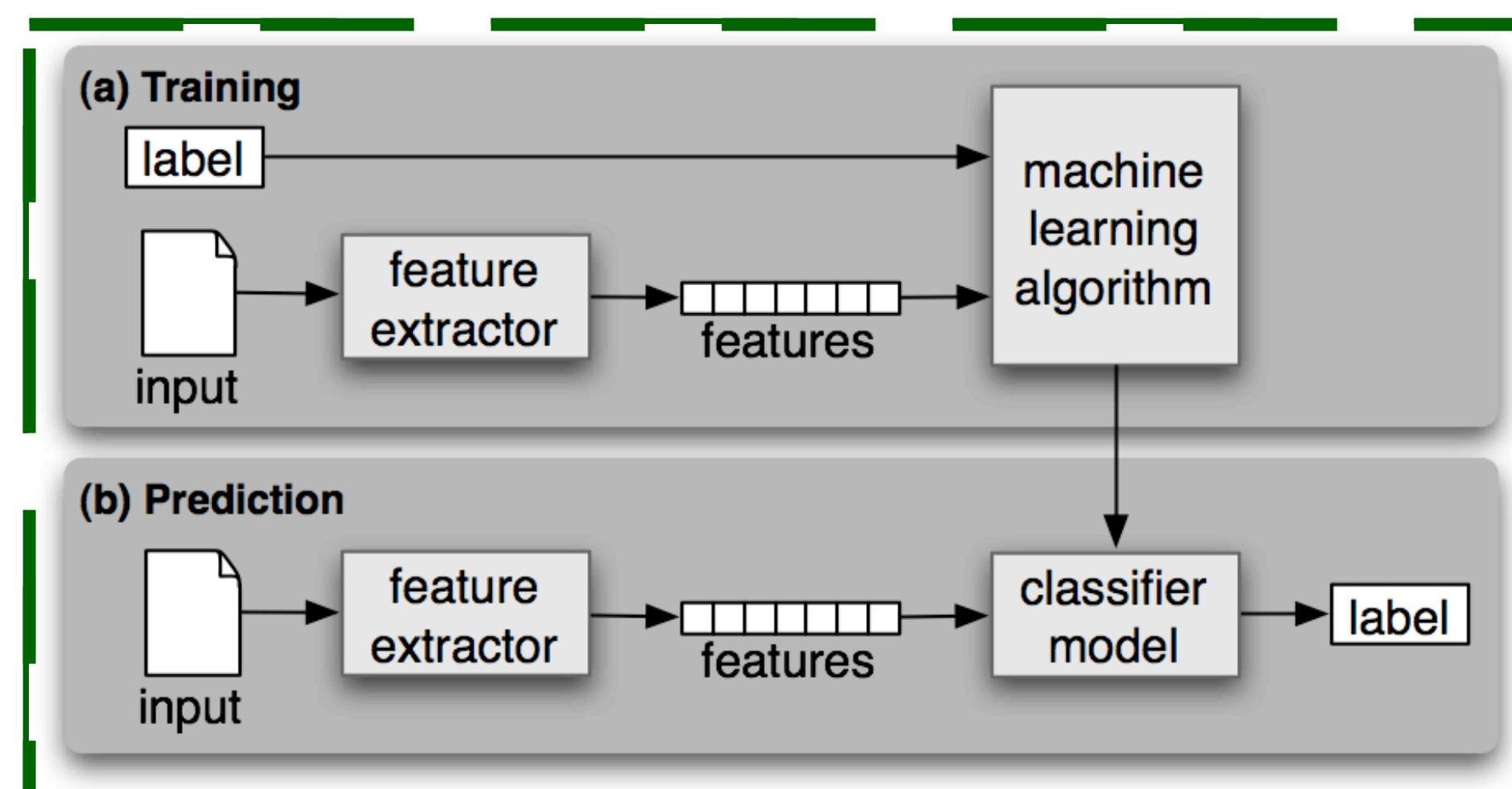
Automated FOREX trading

Anders Wessberg s103477
Benjamin Maksuti s103449
Kevin Voss Sjøbeck s103451

Introduction

We all know the feeling of having **money**, but also know that you need to **work** to get money. What if you could let your money do the work for you of getting **more money**.

We therefore started creating a **bot** that would trade on the **currency market**, and by trying with different **strategies**, we would hope to find one that would get the **highest profit**, with the **lowest risk**



Method

(Oanda)

This bot will use the **oanda's API**, and in that way get a currency data and make trades based on it. For retrieving the data as well as making trades we will use **machine learning** with **python**, and in that way hopefully end up with some sort of **profit**.

At each strategy we would invest **10000 \$** with a leverage at 20, the data we go through is on 5-min interval from 2007 -2014

Strategy V.1

(Random)

We start with a random trader that trades **20%** of each 5 min interval. when it trades it has a **50/50 %** chance of going **short** or **long**.

This strategy simulates how a normal person would trade.



Data

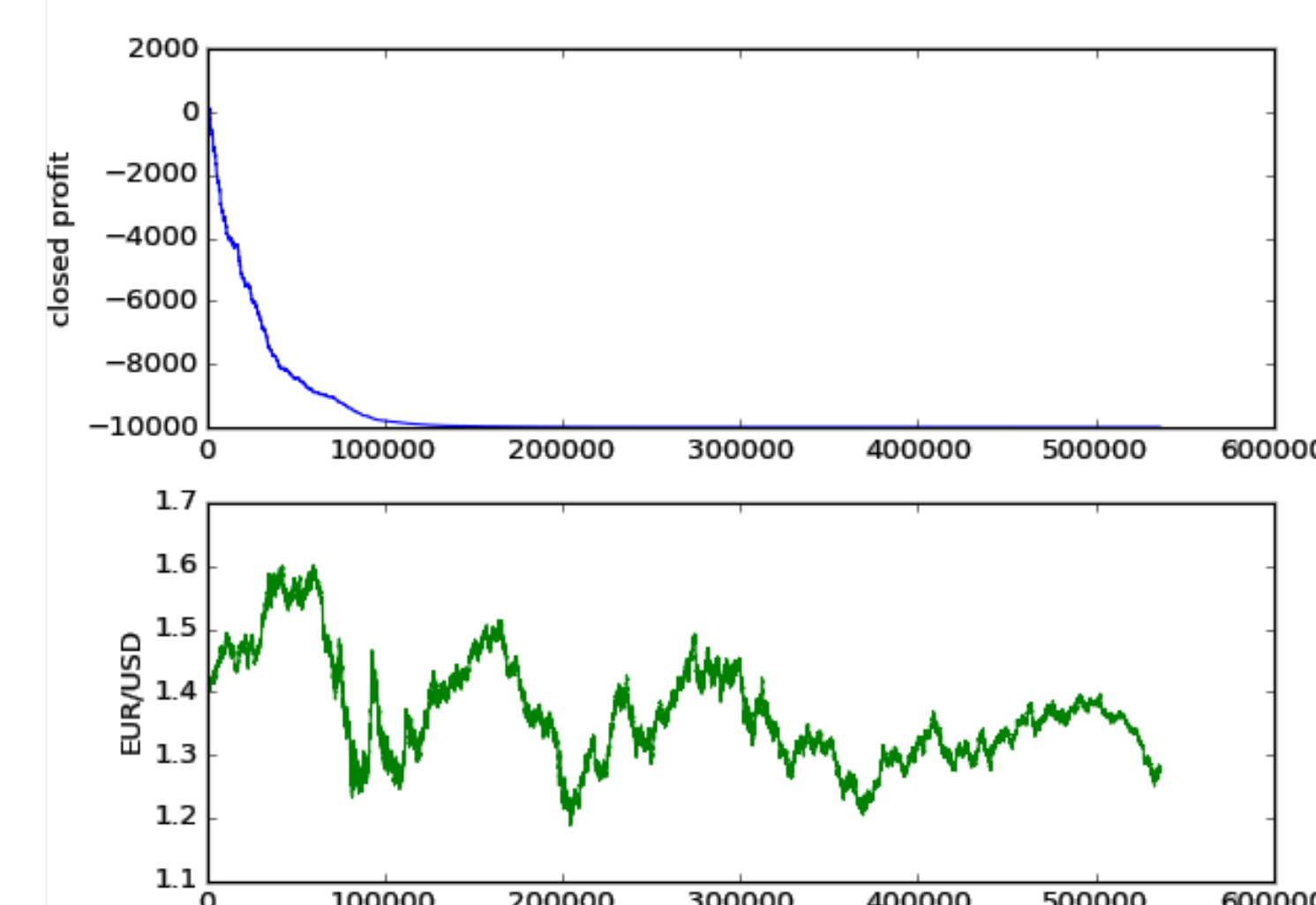
While running the random trader, we collect all **data** on the trades which gave a **profit**.

So that we can use them to **train** our **classifier**.

Result V.1

Even though we ran the random trader several times, it **kept on losing** all money invested.

Closed profit: -9998



Strategy V.2

(Classifier takeProfit/stopLoss)

We are using a **Naive Bayes** classifier, that will **analyze** the trading market and make a **calculated** assumption whether it should go short or long. Profitable trades only closes when they exceed **takeProfit** or **stopLoss**

Features

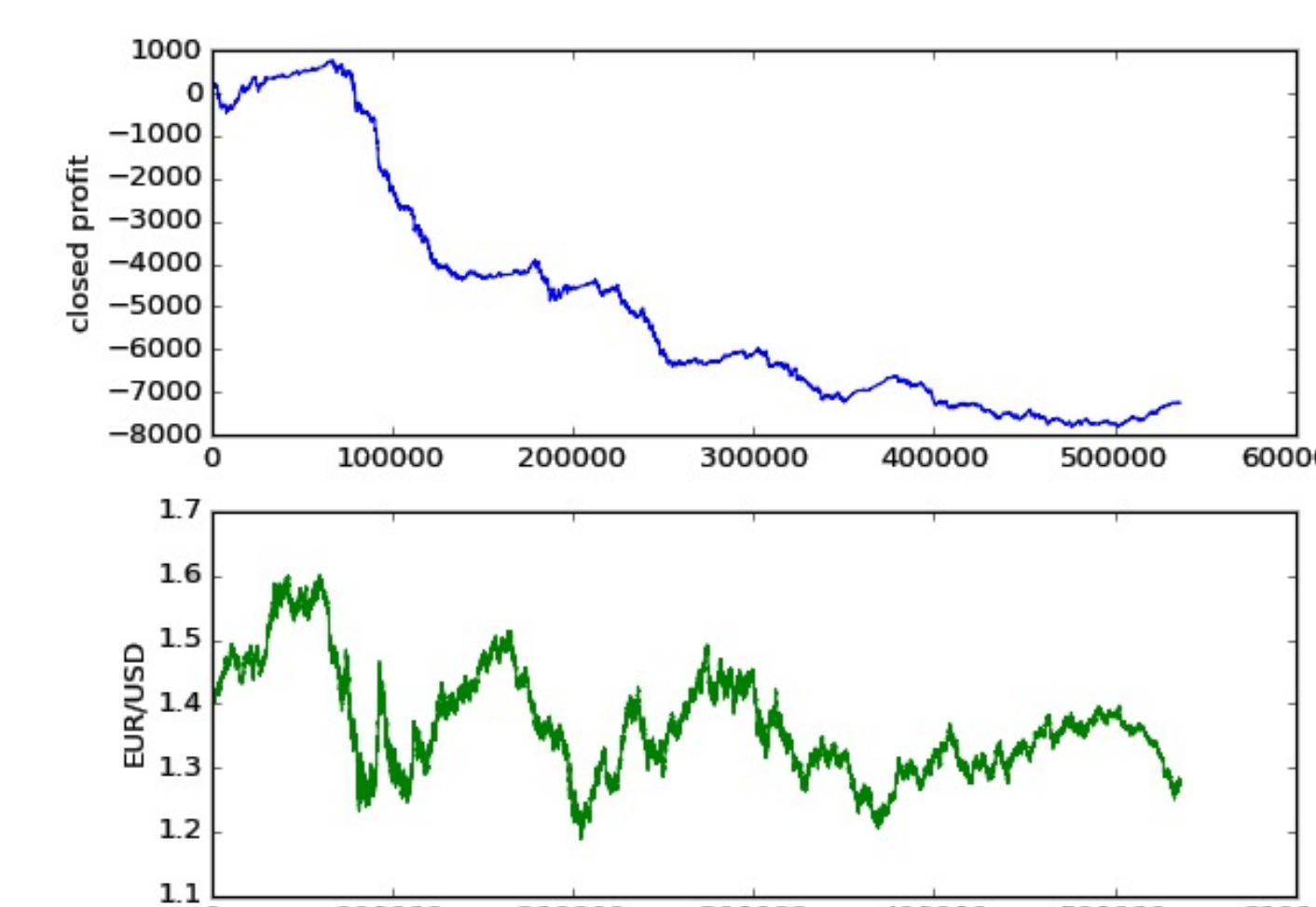
A classifier is only as good as the features it receives, we therefore use six features each analyzing the data with a different view.

Features	SMA(10,40)	Spread
	openBid	RSI
	closedBid	Volume

Result V.2

Even though we told the classifier had to be **96%** sure when it traded, it would **lose** almost all money invested.

Closed profit: -7252

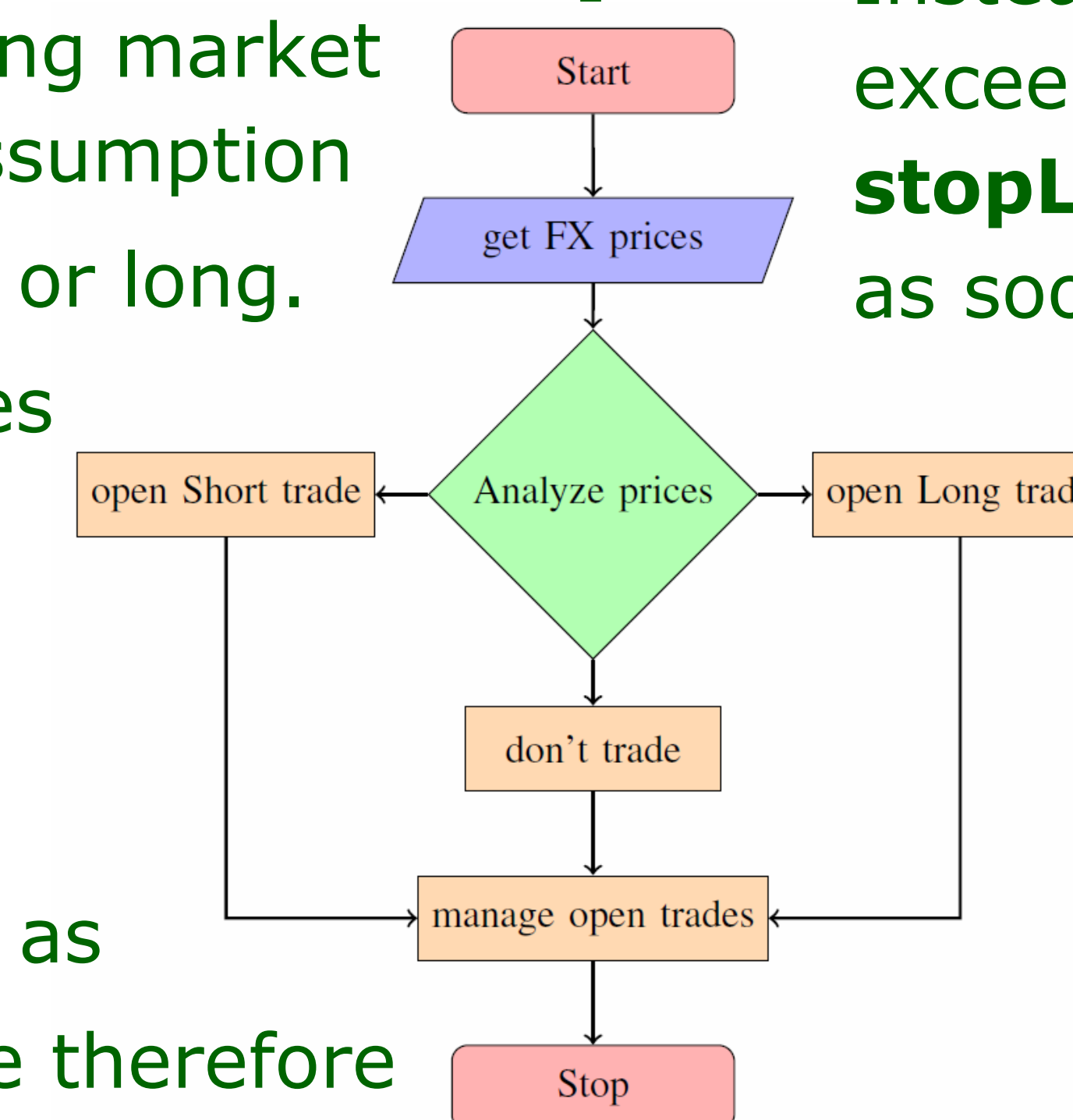


Strategy V.3

(Classifier profit)

Instead of waiting for the profit to exceed the **takeProfit** or **stopLoss**, we now close an order as soon as it gets **profit**.

This means that the profit is earned though a **slow** process, over several orders.



Result V.3

Now that we change the strategy our classifier would close trades, as soon they got **profit**.

Closed profit: 198232

