Nonpariel Capital: An alternative approach to capital markets

Our Mission

The Nonpariel founding team met during the October 2016 piscine, at the 42 Silicon Valley campus. We discussed and shared a passion for the idea of forming an algorithmic trading focused hedge fund, later adopted for the cryptocurrency markets. The influx of new traders and investors meant a lot of people were losing money and being scammed. We wanted to bring the tools being used on wall street to the average cryptocurrency investor or trader, protecting and improving their investments while making money for everyone in the process.

Early Development

In January we built our backtesting framework, opting to build it from scratch as opposed to using a backtesting service like Quantopian or Darwinex. For the first few months we tested a huge combination of traditional quantitative analysis tools and basic statistical strategies with good success in stock markets but none in cryptocurrency markets. We also experimented heavily with machine learning strategies like using LSTM RNNs on time series order book data, or even using convolutional layers on historical price and valuation change vector matrices before feeding them to the RNN for portfolio selection. We found better strategies there, and also with linear, ridge, lasso, etc regression models, but nothing like we saw with the OLPS (Online Portfolio Selection) algorithms.

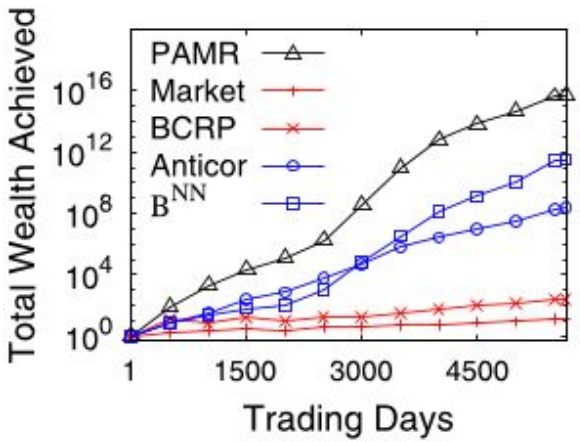
Portfolio Management

During our research we began experimenting with the nature of volatile but correlated sets of assets, leading to the development of Angel1.2a . It exploited inefficiencies within those correlated groups of volatile assets. After ~3 months of coding and testing our Angel1.2a algorithm was ready for testing. March through May it generated >300% returns, around halfway through we began taking outside investments. It ran through the end of June, generating >400% returns on the initial investment.

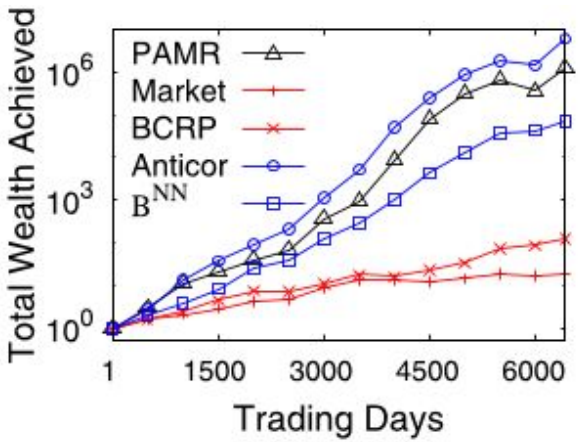
Then we discovered the OLPS family. PAMR (Passive Agressive Mean Reversion), RMR (Robust Mean Reversion), BCRP (Best Constantly Rebalanced Portfolio), and AntiCor (Anti-Correlation). These algorithms are the hallmarks of academic algorithmic portfolio management.

We saw a lot of what we had programmed into Angel1.2a in these algorithms, but also things we had not programmed into Angel1.2a . We were able to take what we learned, apply it to our existing work, and increase the effectiveness beyond that of the best known (to academia) portfolio management algorithm.

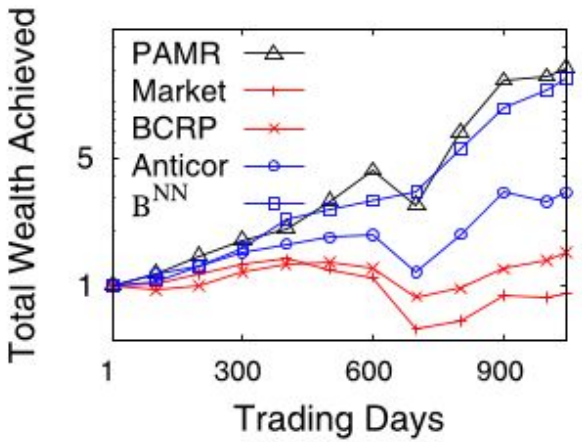
Angel1.3



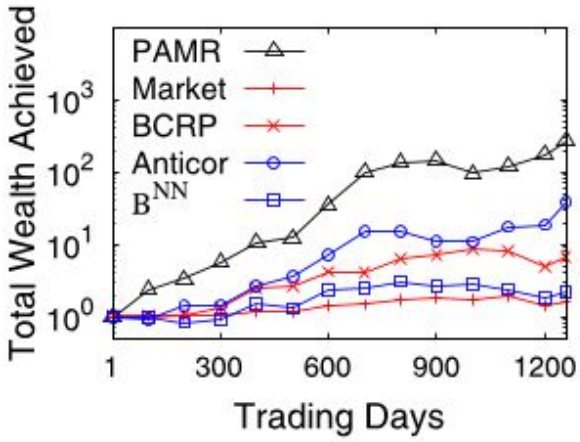
(a) NYSE (O) dataset



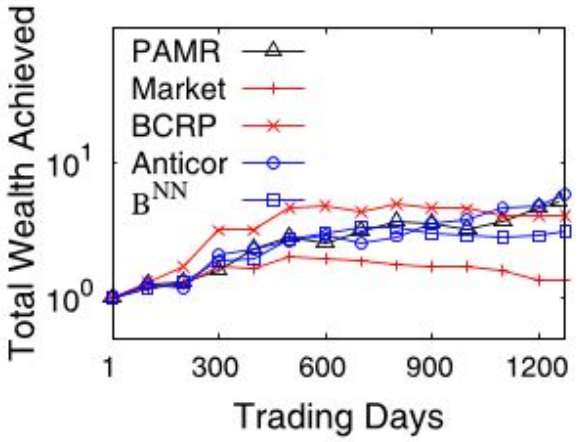
(b) NYSE (N) dataset



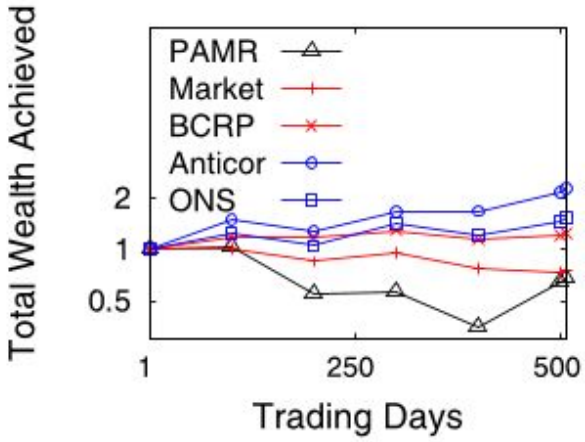
(c) MSCI dataset



(d) TSE dataset

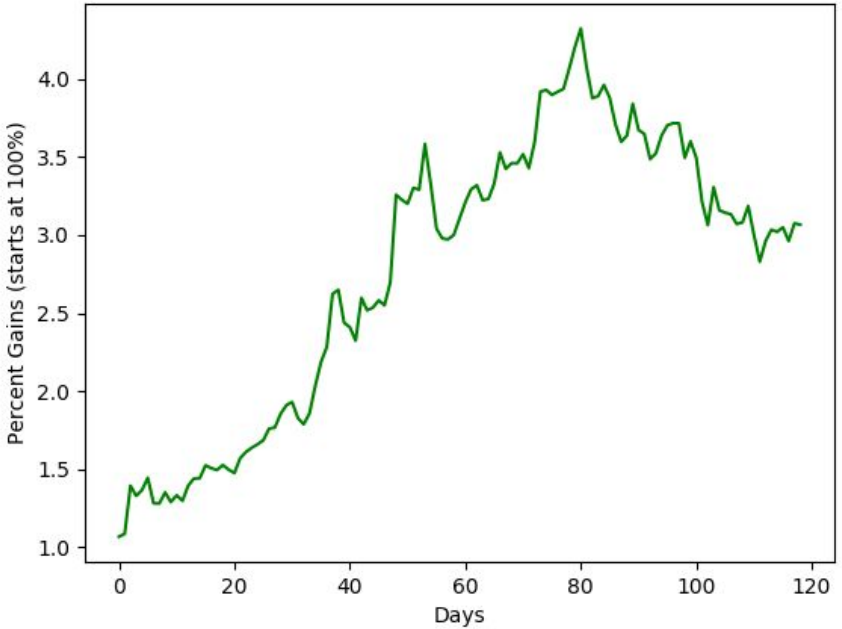


(e) SP500 dataset

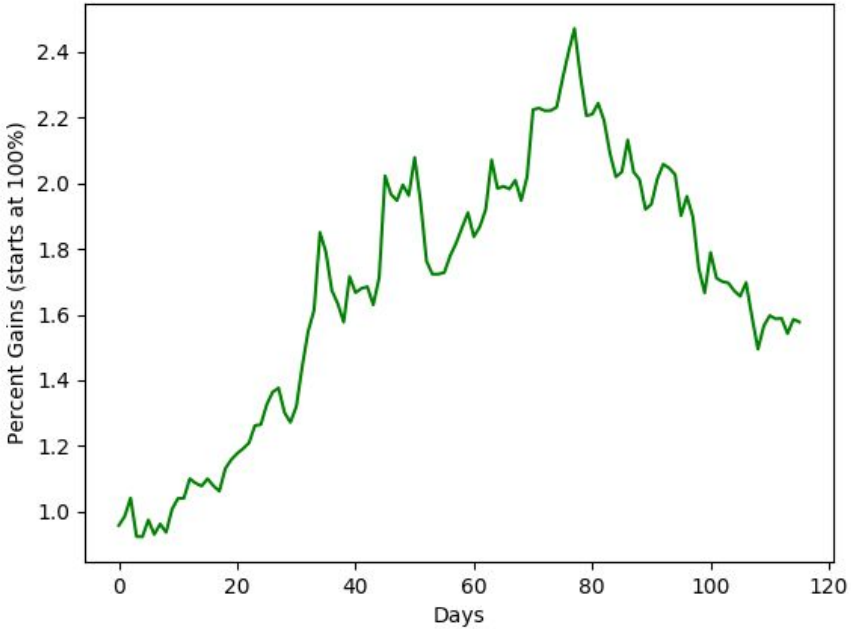


(f) DJIA dataset

*scaled 1 = 100% (ie; 1.15 = 115% = +15%)

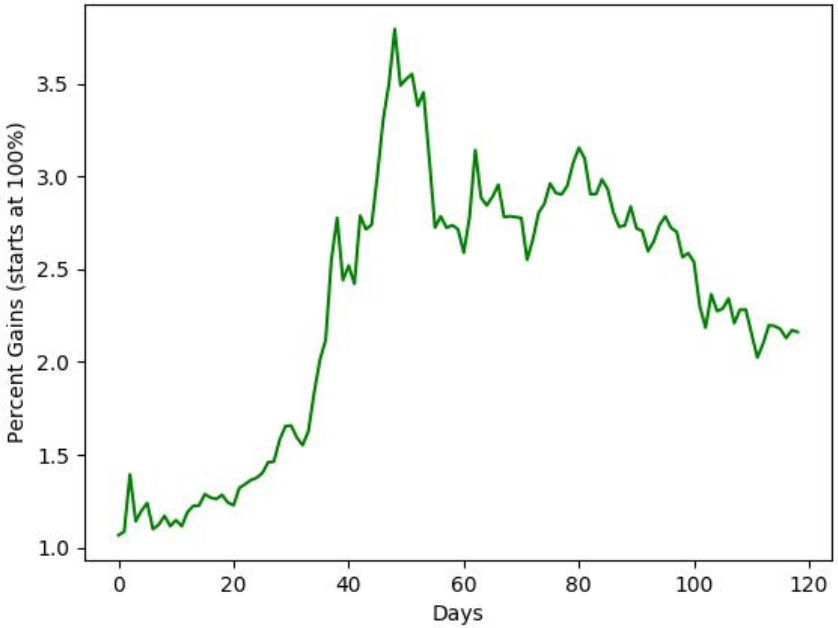


Angel1.3.1



PAMR

*scaled 1 = 100% (ie; 1.15 = 115% = +15%)



Buy and Hold

Entropy Series / Sensus Partnership

Sensus is a sentiment analysis company local to the bay area. We were contacted by its co-founders, Christian Ferri and Patrik Wijkstrom, to partner for an ICO to fund the development of the Entropy series and Sensus engine.

The Entropy series will use sentiment analysis data, provided by Sensus, taken from every corner of the bitcointalk forums to huge sources like a twitter firehose, to trade cryptocurrencies based on market sentiment. Due to the low volume and lack of institutional investors we believe sentiment analysis will be even more successful in these markets than in traditional stock markets.

Plans

Currently we are preparing for the partnership and integration with the Sensus team and engine.
Developing the Entropy series will be a long process, same for the Sensus engine.
Of course we will also be maintaining the Angel1.3 algorithm, developing the Angel series,
and taking care of our existing clients.

In addition we plan to onboard new team members to assist with the development of our front-end, and to assist with the integration and development of the Entropy series and Sensus engine.

In the future we will continue to develop both the Angel and Entropy series algorithms,
continually improve our UX, and research new market inefficiencies to exploit.