Stevens Algorithmic Trading Competition
Spring 2019
(Beta Ver.)

Open to all Stevens students:

- 10 teams of 3 compete for the top cash prizes

Important dates:

- 02/08 : Information Session
- 02/14 : Deadline for Applications
- 02/15 : Environments Setup
- 02/22 – 03/01 : Q&A Sessions
- 03/08 – 04/26 : Algorithmic Trading Competition (6 sessions with 2-week break during midterms)

How to apply:

- Email the 3 team members names and majors to: algotrading@stevens.edu

Stevens Algorithmic Trading Competition
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Competition Eligibility:

- Only current Stevens students are allowed.
- Teams may be composed of both graduate and undergraduate students, from any major.
- Each team is required to have 3 students, with a designated team leader.
- Teams will be using Python for their trading strategies. **Previous programming experience is required.**
- Registration: via email until 02/14 at 23:59pm. Teams will be registered on a first come, first served basis. **At least one team member must have attended the Information Session on 02/08.**

Schedule (all meetings will be held at the Hanlon Lab I – 4th floor of Babbio):

- 02/08 at 1:00pm: Information Session – Competition structure discussion, and introduction to the algorithmic trading system we will be using, along with a demo of its Python API. The objective is to give students an idea of what they will be getting into if they decide to participate in the competition. **Participation of at least one team member is mandatory.** We will be open for questions at the end.
- 02/14 at 23:59pm: Deadline for Applications.
- 02/15 at 1:00pm: Environment Setup - We will help students with the installation of our Python API, provide information on how to connect to the system for training and competition sessions, and talk about other technicalities.
- 02/22 & 03/01 at 1:00pm: Q&A Sessions – To deal with issues that might arise when students start using the platform. Students should also use this time to start training their models.
- Algorithmic Trading Competition dates:
  - 03/08, 03/15, 04/05, 04/12, 04/19, 04/26
  - Simulation will run from 10:30am to 05:00pm
  - Trading strategies are due the day before at 11:59pm
- All dates are subject to changes, especially if there are any technical issues in the official competition dates, so that we are fair with all participants. **This a beta version of the trading competition.** Prior notice will be given.

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Competition Specifications:

- Trading assets: all 30 of the Dow Jones stocks.
- Each team will have a single trading account.
- Only algorithmic trading is permitted.
- All teams will compete in the same simulation environment.
- Teams will submit their trading strategies during the day prior to the weekly competition day. The team leader is responsible for this submission.
- Limited support is available. However, we are not responsible for fixing or debugging your algorithms.
- All communication with the teams will be done via email. It is the responsibility of the team leader to remain up-to-date with the events.
- The winning team will be determined by the highest total profit by the end of the competition period.
- The top teams in the competition will be awarded cash prizes. The exact prizes structure will be communicated at the Information Session, and is subject to the number of competing teams. All members of a team receiving a cash prize will be required to fill out an individual W-9 or W-8 form.

Technical Specifications:

- All simulations will be run using the SHIFT Project, an in-house HF Trading Simulation System (https://laplace.fsc.stevens.edu/projects/?q=joint/shift)
- Teams will be using our Python API to execute trades. The API works on any platform (Windows, Mac, Linux).
- A VM Machine will be provided for each of the teams to test their strategies. SSH access is required for the VMs, and a VPN connection is required for access from outside of the school. Only one team member can be logged into the VM at a time.
- We will be using the Anaconda 3.7 distribution of Python 3.7. Only packages that are part of the main “anaconda” package are allowed.
- Running the trading strategy must be as simple as running “python run.py”.
- If your trading strategy requires database access, you will be required to use SQLite, so that the database can be submitted along with the trading strategy prior to the weekly challenge day.

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Trading Rules:

- Beginning Account Balances: $1,000,000.00.
- Balance will be reset at every competition day.
- Algorithmic trading only.
- Intraday trading only.
- Algorithms are required to open (and close) a minimum of 10 positions per competition day.
- Shares can only be traded in lots of 100.
- A rebate of 0.002 per share will be paid for executed limit orders, at the end of each competition day.
- A fee of 0.003 per share will be charged for executed market orders, at the end of each competition day.
- All limit orders withhold balance until execution.
- Short positions will withhold the equivalent balance in cash.
- The winning team will be determined by the highest total profit by the end of the competition period.
- Penalties:
    - Not executing 10 entries per competition day: $100,000.00.
    - Any remaining positions will be closed at the closing day price + 1%.
    - Teams using similar source codes will be eliminated from the competition.

All submitted source codes may be used to potentially improve the system or for research projects. No personal information will be shared.

At the end of the competition, all source codes will be published and made available for teaching and learning purposes.

Contact information:

- For questions, please email us at algotrading@stevens.edu