

The background of the slide features a blurred image of Python code. The code includes a list of symbols like 'SPY', 'AAPL', and 'BBRY', a loop over time steps, and a strategy using Simple Moving Average (SMA) indicators. The strategy logic is: for each symbol, get the closing price, calculate SMA20 and SMA50, and if SMA20 is greater than SMA50, open a position.

Stevens-Capco Algorithmic Trading Competition Spring 2022

Exclusively for Stevens students:

- 10 teams of 3 students competing for the top cash prizes

Important dates:

- 03/21 : Information Session
- 03/23 : Deadline for Applications
- 03/25 : Environments Setup
- 03/30 : Test Run
- 04/01 : Q&A Session
- 04/08 – 05/06 : Competition Trading Days (5 sessions)

How to apply:

- Email your team's name, 3 team member's names and majors to: algotrading@stevens.edu

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. **Knowledge of GitHub and Python programming is required.**
- Registration: via email until 03/23 at 11:59pm. Teams will be registered on a first come, first served basis. **At least one team member must have attended the Information Session on 03/21.**

Schedule (all meetings will be held online via Zoom):

- **03/21 at 2:00pm: Information Session** – Presentation of the Competition and its rules, introduction to the algorithmic trading system **SHIFT** we will be using, demo of the Python API for SHIFT, Q&A. **Presence of at least one member of prospective teams to the information session is mandatory for applications to be accepted.** Location: Hanlon Lab 1 (4th floor in BC).
- **03/23 at 11:59pm: Deadline for Applications.**
- **03/25 at 3:00pm: Environment Setup** - We will provide support to students for installation of our Python API, and assistance for connection and use of SHIFT for the training sessions and the and competition. Location: Hanlon Lab 1 (4th floor in BC).
- **03/30 8:00 am: Deadline for code submission for test run.**
- 04/01 at 2:00pm: Q&A Session – To deal with issues that might arise when students start using the platform. Students should also use this time to start training their models.
- **Competition dates: 04/08, 04/15, 04/22, 04/29, 05/06**
 - **Simulation will run on competition dates from 10:30 am to 05:00 pm**
 - **Trading strategies are due at 8:00 am on competition dates.**
- All dates are subject to changes. For example, a given competition date may be rescheduled if some technical issues make the system unavailable to some of the participants. **This a beta version of the trading competition.** Prior notice will be given.

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.
- The team will be removed from the competition if their submitted code is invalid (i.e., do not finish the competition) in two formal events.
- 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 final performance of a team is defined by the sum of the team's realized Profits and Losses (**\$ Total PnL**) on the 5 competition days. The **\$Total PnL** will be used to rank teams.
- 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://fsc.stevens.edu/high-frequency-trading-simulation-system/>)
- 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 to each team to test its strategy. 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.



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.
- 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