Generation of investment proposals in the Venture Capital investment simulator VCR

CambridgePYTHON

Background

VCR (Venture Capital Research) is online game which allows to build and manage a portfolio of high-tech start-up companies.
It also gives a glimpse into the mechanisms of decision making in the world of business angels and venture capital investors. The game belongs to edutainment (a.k.a. educational entertainment) genre and is free of charge for the players.

The player takes an active role of a venture capital investor starting with some cash. In subsequent turns of the game she may invest the money in various (virtual) start-up companies, sell her shares or just keep the money on deposit. He makes his decision based on short investment proposals and periodic reports which are provided each turn. The goal is to make the highest profit by investing in the most promising ventures.

Contrary to ordinary stock market simulators, it is impossible to make use of real-world company information to prepare a virtual investment environment in VCR. First, it is because time in the game is rescaled (one year is represented by one week in the game), on the other hand, using the historical data, even with anonymized companies, would make the game too predictable. In current implementation, administrators of the game have to prepare all investment proposals and periodic reports by hand which tedious, time consuming and difficult to maintain.

Problem description

The main challenge is to propose the methodology to generate investment proposals and periodic reports such, that the game world resembles a real venture capital market.

Investment proposals contain:
- Start-up description (general information about the idea, team, product, market, etc.)
- Investment period (number of turns),
- Launch date (turn in which the proposal appears),
- Investment amount,
- Level of involvement (percentage of stake),
- …

Periodic reports include:
- Current company's value,
- Company's financial data (e.g. income, costs, profit, etc.) and its prediction for the next turn,
- Additional information about the market, economy, etc.
- …