



# Freie Universität Berlin: Handle and analyze real-world event streams

Customer success story

Freie Universität  Berlin

“Companies need specialists in the fields of streaming and big data analysis. With Software AG’s Streaming Analytics Education Package, we are using leading-edge software to educate data scientists.”

– Professor Dr. Adrian Paschke | Freie Universität Berlin



### University Partner

Freie Universität Berlin, founded in 1948, is one of Germany’s leading research universities and the highest ranked. It is one of the German Excellence Universities that has succeeded in all three funding lines in the federal and state Excellence Initiative. Additionally, Freie Universität Berlin was one of nine German top universities to win in the German Universities Excellence Initiative, a national competition for universities organized by the German Federal Government.

### Software AG solution

- Streaming Analytics Education Package (SAEP)

### Key benefits to faculty members:

- Predefined teaching material, including tutorials and corresponding solutions
- Decreased lecture preparation time
- Packages are free of charge
- Keeping students excited through leading-edge and easy-to-use software

### Key benefits to students

- Expanded knowledge in streaming analytics and analyzing high throughput of data from multiple data sources
- Visualize business activities in real time by identifying patterns
- In-depth experience with leading-edge streaming analytics software
- Teamwork and management skills as a preparation for future careers
- Free certification

“You can’t manage what you can’t measure. And you can’t fix what you can’t see and understand.”

As big, fast data proliferates, more and more data streams are being generated in real time from a myriad of data sources, such as Internet of Things (IoT) sensors, markets, mobile devices, internal transactional systems and clickstream analysis. Real-time insights must be derived from this data to give a competitive edge to agile organizations that want to act on these insights before they lose their value. To handle billions of these data streams, new software architectures and techniques are needed.

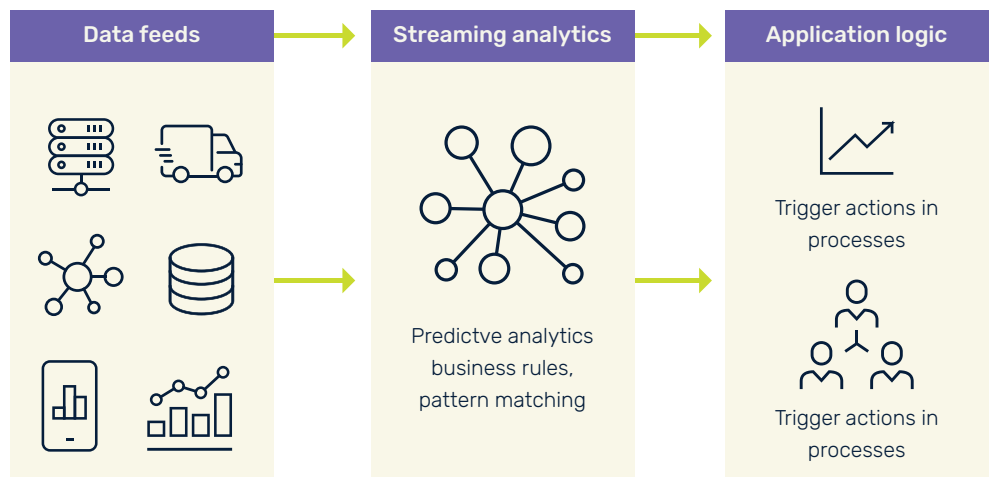
These types of software are called “Big Data Streaming Analytics.” Companies need educated specialists to harness the power of big data. The Streaming Analytics Education Package (SAEP) is Software AG’s answer to the growing demand for data science experts. Universities and private companies share the responsibility of training the sought-after talent currently demanded by the market.

Freie Universität Berlin considers close and sustained cooperation with companies such as Software AG to be a valuable opportunity to offer market-oriented projects to their students.

## Needed: data scientists

Freie Universität Berlin recognized the need for data scientists early on. The university decided to use the SAEP to help students become specialists in the field of event processing and analytics.

The SAEP is designed to be a full-term independent study project, enabling students to handle and analyze real-world event streams. The SAEP contains streaming analytics software, enabling informed decisions to be made at speed and scale by integrating real-time analytics and decisioning into transaction executing systems.



## Key facts

- 24+ students work on package
- Excellent head start for student careers
- Certification from Software AG for future job seekers
- Leading-edge technology free of charge

## Real business scenario with 50 million data sets

University students use the "Soccer Scenario," one of the case studies included in the SAEP. It requires the students to analyze position data of both, players and ball, in a soccer game and generate information about the game as results in a dashboard. The scenario includes 50 million data sets recorded using sensors mounted on soccer players' shoes and gloves as well as on the ball. In total, groups of 24 master and bachelor students could either work on the project independently or within a group. "In the past, we only had access to small data sets, but with the SAEP we could practice structuring and filtering data as the set was very large," one student emphasized. The student groups were supported by Professor Dr. Adrian Paschke, head of the Corporate Semantic Web group (AG-CSW) at FU Berlin. He is also director of the Data Analytics Center (DANA) at Fraunhofer FOKUS, Director of RuleML Inc. in Canada, and a professorial member at the Institut für Angewandte Informatik (InfAI) at University of Leipzig.

## Teaching theory through practice

The goal was for the students to gain in-depth programming knowledge about the applications of streaming analytics. "I didn't know much about complex event processing before starting this education package, so it was great having such a practical example," one student said. "It was a welcomed change to work with real-world data. We could even watch the video of the data being created." Added Professor Paschke, "The collaboration with such a successful industry partner is a significant added value for the university. We could educate students with market-leading software, absolutely free of costs. Additionally, the SAEP is divided into clearly defined steps, so that every student knew what to expect and how to proceed." Whenever questions in the project arose, Software AG's University Relations department assisted. The students also had access to Software AG's TECHcommunity forum to exchange ideas with and give and receive support from students at other universities around the world.

## Benefits

By using the SAEP, students not only gain technical skills, they also establish social skills needed professionally by working together as a team and being in close contact with a company. All involved faculty members were delighted by the motivation with which the students addressed the package-specific challenges. Prof. Paschke reported: "Students were so highly motivated that they were even doing additional tasks." He also added: "They are proud of what they achieved and want to show it at the open house day. Due to the overwhelmingly positive feedback we received from the students, we've decided to use the SAEP in future semesters. Next time around, we would like to extend the soccer scenario for more advanced semantic event pattern mining and would use further scenarios and test data sets." Software AG University Relations is currently working on additional real business scenarios.

After having completed the project, the students got a free certification from Software AG. The document was in high demand and demonstrates the excellent head start it promises for future job applications.



**Take the next step**

For more information, visit:  
[www.SoftwareAG.com/university](http://www.SoftwareAG.com/university)

To contact us, send an email to:  
[university@softwareag.com](mailto:university@softwareag.com)

## ABOUT SOFTWARE AG

Software AG began its journey in 1969, the year that technology helped put a man on the moon and the software industry was born. Today our infrastructure software makes a world of living connections possible. Every day, millions of lives around the world are connected by our technologies. A fluid flow of data fuels hybrid integration and the Industrial Internet of Things. By connecting applications on the ground and in cloud, businesses, governments and humanity can instantly see opportunities, make decisions and act immediately. Software AG connects the world to keep it living and thriving. For more information, visit [www.softwareag.com](http://www.softwareag.com).

© 2020 Software AG. All rights reserved. Software AG and all Software AG products are either trademarks or registered trademarks of Software AG. Other product and company names mentioned herein may be the trademarks of their respective owners.