International Journal For Advanced Research In Science & Technology
A peer reviewed international journal www.ijarst.in
ISSN: 2457-0362

SCHOOL ENTERPRISE CORPORATION ON PYTHON DATA ANALYSIS TEACHING

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ABSTRACT

To meet the needs of enterprises for data analysis talents, school-enterprise cooperative course Python Data Analysis introduces the basic theories and methods for data analysis by using the Python programming language. The teaching content is organized around practical cases designed according to the actual demand of the enterprise. Exploratory teaching methods are conducted to cultivate the communication, collaboration, critical thinking and creativity ability of students. Students fully participate in the teaching process by discussing, analyzing and programming the cases. The implementation scheme, organization of exploratory teaching and the design of teaching cases are introduced in this paper.

1. INTRODUCTION

Python Data Analysis is a school-enterprise cooperative course supported by the Ministry of Education of China. School-enterprise cooperation program aims to deepen integration between industry and education by building the courses that meet the needs of enterprises. With the development of mobile Internet, Internet of Things and artificial intelligence, more and more disciplines are on the basis of computation, such as computational physics, computational chemistry, and computational biology and so on. Data analysis technique, that is to discover useful information, suggest conclusions, and support decision-making, has become a basic supporting technique of computation. Python Data Analysis course introduces the basic theories and methods for data acquisition, processing, modeling and analysis by using Python programming language. This course is suitable for anyone who wants to perform data analysis. Python is a concise and efficient programming language preferred as the entry language for programming. Python provides a rich third-party library for data analysis that enables learners to focus on problem solving. After learning this course, students will gain the basic data analysis ability as well as computational thinking for research and practice in all scientific fields they engage in. Reform is conducted on both the teaching content and teaching method. The teaching content is organized around practical cases designed according to the actual demand of enterprises. Exploratory teaching methods are conducted to cultivate the communication, collaboration, critical thinking and creativity ability of students. Students fully participate in the teaching process by discussing, analyzing and solving cases. The rest of this paper is organized as follows. We begin with the introduction of data analysis courses in universities in Section 2. The design of teaching cases is proposed in Section 3, and the

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implementation scheme and organization of exploratory teaching are presented.

2. LITERATURE SURVEY

1) A research framework of smart education

The development of new technologies enables learners to learn more effectively, efficiently, flexibly and comfortably. Learners utilize smart devices to access digital resources through wireless networks and to immerse in both personalized and seamless learning. Smart education, a concept that describes learning in the digital age, has gained increased attention. This paper discusses the definition of smart education and presents a conceptual framework. A four-tier framework of smart pedagogies and ten key features of smart learning environments are proposed for fostering smart learners who need master knowledge and skills of 21st century learning. The smart pedagogy framework includes class-based differentiated instruction, group-based collaborative learning, individual-based personalized learning and mass-based generative learning. Furthermore, a technological architecture of smart education, which emphasizes the role of smart computing, is proposed. The tri-tier architecture and key functions are all presented. Finally, challenges of smart education are discussed.

School-Enterprise Cooperation on Python Data Analysis Teaching

To meet the needs of enterprises for data analysis talents, school-enterprise cooperative course Python Data Analysis introduces the basic theories and methods for data analysis by using the Python programming language. The teaching content is organized around practical cases designed according to the actual demand of the enterprise. Exploratory teaching methods are conducted to cultivate the communication, collaboration, critical thinking and creativity ability of students. Students fully participate in the teaching process by discussing, analyzing and programming the cases. The implementation scheme, organization of exploratory teaching and the design of teaching cases are introduced in this paper. Index Terms— School-enterprise cooperation, Python, data.

3. EXISTING SYSTEM

The potential of artificial intelligence technology is undoubtedly magnificent. As the most widely used technology possessing the highest theoretical research value in artificial intelligence. Early machine learning courses are mainly set up for postgraduate students with majors of Computer and Artificial Intelligence. With the advent of the artificial intelligence and big data age, it is necessary to set up machine learning courses in undergraduates.

DISADVANTAGES OF EXISTING SYSTEM:

- The ability to collect, store, manage and process data has been difficult in existing methods.
- The stage of artificial intelligence is also defined as a discipline about knowledge, namely the technology about how to acquire and express the knowledge and convert it into practical applications

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4. PROPOSED SYSTEM

School-enterprise cooperation program aims to deepen integration between industry and education by building the courses that meet the needs of enterprises.

Data analysis technique, that is to discover useful information, suggest conclusions, and support decision-making, has become a basic supporting technique of computation. Python Data Analysis course introduces the basic theories and methods for data acquisition, processing, modeling and analysis by using Python programming language. This course is suitable for anyone who wants to perform data analysis. Python is a concise and efficient programming language preferred as the entry language for programming.

ADVANTAGES OF PROPOSED SYSTEM:

After learning this course, students will gain the basic data analysis ability as well as computational thinking for research and practice in all scientific fields they engage in.

Ability to make faster, more informed business decisions, backed up by facts.

Deeper understanding of customer requirements which, in turn, builds better business relationships.

Improved flexibility and greater capability in order to react to change - both within the business and the market.

5. CONCLUSION

In this paper, we showed our exploration and reform on the school-enterprise course Python Data Analysis. We analyzed the requirement of enterprises and determined the teaching content accordingly. The teaching content was further organized around the cases designed from simple to deep. To cultivate creativity and scientific exploratory ability, student centered teaching was performed. Students learned by trial, exploratory and verification of cases. The benefit of case based exploratory teaching of data analysis using Python is that students will focus on how to use computational thinking.in practical data analysis rather than be overwhelmed by the details of theory and programming.

6. REFERENCES

[1] Introduction to computer science and programming using python. https://www.edx.org/course/introduction-computer-science-mitx-6-00-1x5#!

[2] Introduction to computational thinking and data science. https://www.edx.org/course/introduction-computational-thinking-datamitx-6-00-2x-2.

[3] Play with data in python. https://www.icourse163.org/course/nju1001571005.

[4] Python data analysis and presentation. https://www.icourse163.org/course/bit-1001870002

[5] Shuaiguo Wang. Smart teaching tools in the context of mobile internet and big data. Modern Educational Technology, 5:26–32, 2017.