NJIT@JerseyCity

Certificate in Data Mining

Certificate in Data Mining (12 credits)

Training Data Analysts

This certificate program provides essential skills for **data analysts** working to extract actionable intelligence from their data resources. Topics covered include principles of information-retrieval system design and management, and basic techniques for data visualization and analysis.

Many companies collect significant amounts of data about their customers and their activities but must "mine" through data silos to discover crucial insights and knowledge. This certificate provides an introduction to data mining with an emphasis on large-scale databases as a source of knowledge generation and competitive advantage.

The program consists of four courses of three credits each, (three core courses and one elective), typically taught over two semesters of 15 weeks each. Instruction includes formal lectures as well as hands-on projects involving database management, mining methods and basic analytic techniques to extract, report and visualize information from the data.

In this program, we make extensive use of software tools such as SQL, Hive, Pig, SAP/Oracle Warehouse and Power BI/Tableau. Students complete assignments and projects covering both theory and applications on real data with guidance from the professor and teaching assistants.

Recommended part-time credit schedule:
First semester: six, Second semester: six. Total: 12 credits over two semesters **(incl. summer)**.

Core (required) courses:

- CS 634 Data Mining
- IS 601 Web Systems Development
- IS 665 Data Analytics for Information Systems

Sample electives:

- CS 602 Java Programming
- IS 631 Enterprise Database Management
- IS 634 Information Retrieval
- IS 687 Transaction Mining and Fraud Detection
- IS 688 Web Mining

To be eligible for admission to the certificate program, a candidate must hold an undergraduate degree with a minimum GPA of 2.6 on a 4.0 scale. A GPA of 2.75 on a 4.0 scale in the certificate program is required to earn the certificate.

[illegible] A GPA of 3.0 in the certificate program is required to be eligible for admission into an M.S. program.

Program Outcomes:

- Be an analytics specialist in your company, focusing on the management of data from various sources and providing data-driven insights to relevant business units.
- Visualize data for exploration, analysis and communication.
- Provide departments with reproducible data analysis, reporting and dashboard solutions that will enable the achievement of the company's overall goals.

For more information and to apply, contact:
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