Post Baccalaureate Certificate in Machine Learning for Life Sciences

Program Description

The Post Baccalaureate Certificate in Machine Learning for Life Sciences applies machine learning principles to problems in the life sciences, including drug discovery, medical imaging, and omics. After building a foundation of computer programming and machine learning, students will gain practical experience by applying problem specific models in course projects.

Post Baccalaureate Certificate in Machine Learning for Life Sciences Requirements

15 credits

Code	Title	Hours
Choose 15 credits from the following:		
CS 6330	Programming for Machine Learning in Life Sciences (Prerequisites: Admission to program.)	3
CS 6331	Machine Learning for Life Sciences (Prerequisites: Admission to program.)	3
CS 6341	Machine Learning for Drug Discovery (Prerequisites: CS 6330 and CS 6331.)	3
CS 6342	Machine Learning for Medical Imaging (Prerequisites: CS 6330 and CS 6331.)	3
CS 6343	Machine Learning for Genomics, Transcriptomics and Proteomics (Prerequisites: CS 6330 and CS 6331.)	3
CS 6349R	Special Topics in Machine Learning for Life Sciences (Prerequisite: Instructor Permission)	1-3

Admission Requirements

1. Complete the online application.
2. Bachelor, Master, or Ph.D. in Life Sciences or related field.

Completion Requirements

1. Complete all coursework with a B- or higher.
2. Complete CS 6330 and CS 6331.
3. Complete 9 credits from CS 6341, CS 6342, CS 6343, CS6349R
4. At least 12 credits at Utah Tech University for residency.
5. Receive at least a 3.0 GPA for the program.

Post Baccalaureate Certificate in Machine Learning for Life Sciences Program Learning Outcomes

At the successful conclusion of this program, students will be able to:

1. Create and modify computer programs in suitable high level languages using principles of control structures, object oriented programming, and API interactions.
2. Create programs using biology focused libraries required for interaction with chemical objects, transcriptomes, and genomes.
3. Create and modify programs that apply machine learning techniques for life sciences.
4. Create programs with specific applications of machine learning to the life sciences, which include but are not limited to drug discovery, genomic analysis, and medical imaging.