

Comm493: Analytics and Artificial Intelligence for Business**Course Overview & Topics: Winter 2018****Dr. Tracy Jenkin****Course Overview & Objectives**

This course will introduce students to the development of software applications drawing on artificial intelligence techniques such as deep learning and machine learning. The learning objectives for this course are as follows:

1. Understand the services available within an existing Platform-as-a-Service (PaaS) tool, such as IBM Watson's Bluemix, and use those services within a business application.
2. Describe and explain the underlying AI techniques these services employ.
3. Describe and apply contemporary software development and programming techniques to course deliverables.
4. Pitch, design and develop new applications that leverage existing services.

Students taking this course should be comfortable with technology concepts and interested in learning the skills necessary to design and develop software applications using software development kits and PaaS tools. Code templates and tutorials will support students in their software development activities.

This year we will focus on using Watson's Bluemix tools (now IBM Cloud).

Summary of Topics Covered:

1. Platform-as-a-service; IBM Bluemix platform and Watson AI services (e.g., Tone Analyzer, Watson Assistant (chat bots), etc.); how to use those services.
2. Artificial intelligence and analytics concepts underlying these services (e.g., supervised and unsupervised learning, classification techniques, clustering techniques, deep learning, text analytics, training, performance evaluation, overfitting, etc.).
3. Techniques relevant to the design, development and deployment of AI-based business applications: agile development techniques, user experience design, architecture patterns, APIs, test and deployment of applications to the cloud.
4. Creating viable business applications: business case and business model development, pitching the idea, developing and demonstrating a working version of the application.
5. Business side of artificial intelligence; current and future challenges.