**Lecture Schedule** (subject to change. Last updated March 4.)

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| Week | Dates | Readings |
| 1 | Jan 7 |  Introduction (Ch. 1). 1.1-1.3 |
| 2 | Jan 10, 14 |  Probability Theory. 2.1,2.3 |
| 3 | Jan 17, 19, 21. |  Binomial Parameter Estimation. Linear Models for Regression (Ch. 3). Ch. 3.1, 3.1.1-3.1.4, 3.3.1-3.3.2, 3.4. |
| 3 | Jan 21 | **Ass. 1 out: Regression, Nonparametric Methods** |
| 4 | Jan 24, 26, 28. | Linear Models for Regression (Ch.3). Kernel Density Estimation (Ch.2.5). |
| 4 | Jan 31, Feb 2, 4 |  Linear models for Classification (Ch. 4). 4.1.1-4.1.4, 4.1.7, 4.2.1-4.2.2, 4.3.1-4.3.3. Neural Networks (Ch. 5). 5.1, 5.2, 5.3. |
| 4 | Feb 4 | **Ass 1 due. Ass 2 out:** Classification |
| 5 | Feb 7, 9, 11 |  Support Vector Machines (Ch. 6.1-6.3, 7.1). 6.1-6.2 (pp. 291-297). Ch. 7 up to and including Ch. 7.1.2. Graphical Models. (Ch.8) |
| 6 | Feb 21, 23, 25 |  Graphical Models (Ch. 8) |
| 7 | Feb 23 | **Ass 2 due.** |
| 7 | Feb 28, March 2. | Graphical Models (Ch. 8). |
| 8 | March 4 |  Midterm review |
| 8 | March 7 |  **Midterm exam** |
| 9 | March 9, 11 |  Midterm post-mortem. Mixture Models and EM (Ch. 9). |
| ~~9~~ | ~~March 9~~ |  ~~Sampling Methods (Ch. 11.1-11.3)~~ |
| 9 | March 9 | **Ass. 3 out:** Graphical Models and Sampling Methods |
| 10 | March 14, 16,18 |  Mixture Models and EM (Ch. 9). Boosting. |
| 11 | March 21, 23, 25 |  Boosting, Decision Trees, Mixture of Experts (Ch. 14.3-14.5) |
| 11 | March 23 | **Ass 3. due. Ass 4 out:** EM and Combining Models. |
| 12 | March 28, 30, April 1. |  Sequential Data (Ch. 13). Continuous Latent Variables (Ch. 12). |
| 13 | April 4, 6 |  Continuous Latent Variables (Ch. 12) |
| 13 | April 6 | **Ass 4 due.** |
|  | April 20 | **Final Project due.** |

First class: Jan 7

Last day of Classes: April 7

Reading Week: Feb 14-18.