



Environment Setup Instructions

- ✓ **Reading:** Setting Up Your Programming Assignment Environment
8 min
- ✓ **Reading:** Access MATLAB Online and Upload the Exercise Files
3 min
- ✓ **Reading:** Installing Octave on Windows
3 min
- ✓ **Reading:** Installing Octave on Mac OS X (10.10 Yosemite and 10.9 Mavericks and Later)
10 min
- ✓ **Reading:** Installing Octave on Mac OS X (10.8 Mountain Lion and Earlier)
3 min
- ✓ **Reading:** Installing Octave on GNU/Linux
7 min
- ✓ **Reading:** More Octave/MATLAB resources
10 min

Multivariate Linear Regression

- ✓ **Video:** Multiple Features
8 min
- ✓ **Reading:** Multiple Features
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- ✓ **Video:** Gradient Descent for Multiple Variables
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- ✓ **Reading:** Gradient Descent For Multiple Variables
2 min
- ✓ **Video:** Gradient Descent in Practice I - Feature Scaling



Normal Equation Noninvertibility

When implementing the normal equation in octave we want to use the 'pinv' function rather than 'inv.' The 'pinv' function will give you a value of θ even if $X^T X$ is not invertible.

If $X^T X$ is **noninvertible**, the common causes might be having :

- Redundant features, where two features are very closely related (i.e. they are linearly dependent)
- Too many features (e.g. $m \leq n$). In this case, delete some features or use "regularization" (to be explained in a later lesson).

Solutions to the above problems include deleting a feature that is linearly dependent with another or deleting one or more features when there are too many features.

✓ Complete

Go to next item

