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```
function [b0,b1,b2]= polynomial_regression_model(x,y)
    % XA = Y
    n = length(x);
    X = zeros(n,3);

    X(:,1)= 1;
    X(:,2)= x;
    X(:,3)= x.^2;

    Y= y';

    % X'XA = X'Y
    X_trans= X';

    % A = inv(X'X)X'Y
    A = inv(X_trans*X)*X_trans*Y;
    b0 = A(1);
    b1 = A(2);
    b2= A(3);
end
```

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