```
function [ state_dot ] = SatelliteDynamics( t, x, parameters )

    % Code your equations here...

    % The code must return in the order you selected, e.g.:
    %    state_dot =  [velocity;
    %                  orientation_dot;
    %                  acceleration (ac);
    %                  angular acceleration (omega dot)];
    %    state     =  [position; 1:3
    %                  orientation; 4:7
    %                  velocity; 8:10
    %                  angular velocity]; 11:13

    R = quat2rot(x(4:7));

    p_dot = R*x(8:10);
    q_dot = 0.5 * quatProd(x(4:7), x(11:13));
    v_dot = R'*(-(parameters.K / norm(x(1:3))^2) * (x(1:3) /
 norm(x(1:3))));
    w_dot = zeros(3, 1);

    state_dot = [p_dot;
                 q_dot;
                 v_dot;
                 w_dot];

end
```

```
Not enough input arguments.

Error in SatelliteDynamics (line 15)
    R = quat2rot(x(4:7));
```

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