**Term 2: project 4 PID**

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The effect of the P, I, D component of the PID algorithm in their implementation.

1. P component is the proportional part regard to errors; increasing this value could lead to correct errors proportionally in the opposite (negative) way;
2. D component is the part regard to differential of errors; this term could help avoiding overshoot;
3. I component is the part regard to integral of errors; this term helps avoiding long-term errors;

Tuning approach: **manual**

1. Set small values (like 0.01) to all three parameters,
2. Increase 10 times value of P component at first;
3. Increase 10 times value of D component then;
4. Keep increasing 10 times value of P and D component;
5. If the car could not stay in the road, decrease P value and increase D value;
6. Fine tune I component finally