LaTeX Gotchas Homework

Grading Code: Put your grading code here

July 22, 2010

Recreate this homework assignment document (put your grading code in the \author command) up to the code seen at the very end of the document. You can either copy and fix the errors in the LaTeX code at the end or recreate it from scratch. Use any figure you choose in the figure environments. Print out the LaTeX code as well as the output document. There are at least 9 errors.

In 2008, 37,261 people died from accidents on the United States' highways. Of those deaths, 19,794(53%) were due to road departure.

$$\hat{r} = \frac{\frac{m}{w+r^2}}{\sqrt{\frac{p-w}{r_m^r}}} + p\cos\left(\frac{\pi}{2}\right) \tag{1}$$

From this equation $\dot{u}$ and $\dot{v}$ are determined to relate the image-plane velocity of a point to the relative velocity of the point with respect to the camera through the image Jacobian matrix.

$$\begin{bmatrix} \dot{u} \\ \dot{v} \end{bmatrix} = \begin{bmatrix} \frac{f_x}{z} & 0 & \frac{-u}{z} & \frac{-uv}{f_x} & \frac{f_x^2+u^2}{f_x} & v \\ 0 & \frac{f_y}{z} & \frac{-v}{z} & \frac{-(f_y^2+v^2)}{f_y} & \frac{uv}{f_y} & u \end{bmatrix} \times \begin{bmatrix} T_x \\ T_y \\ T_z \\ \omega_x \\ \omega_y \\ \omega_z \end{bmatrix} \tag{2}$$

Some text here.

Figure 1: Figure 1

Do not misspell words.

Figure 2: Figure 2

```
\documentclass{article}%

\usepackage{amsmath}%
\usepackage{amsfonts}%
\usepackage{amssymb}%
\usepackage{graphicx}
%---------------------------------------

\begin{document}

\title{\LaTeX Gotchas Homework}
\author{Grading Code: Put your grading code here}
\date{\today}
\maketitle

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\newpage

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highways.  Of those deaths, 19,794(53%) were due to road departure.

\begin{equation}
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\end{equation}

From this equation $\dot{u} and \dot{v}$ are determined to relate
the image-plane velocity of a point to the relative velocity of
the point with respect to the camera through the image Jacobian matrix.

\begin{equation}
\left[ \begin{array}{c}
 \dot{u} \\
 \dot{v} \\
 \end{array} \right] = \left[ \begin{array}{cccccc}
 \frac{f_x}{z} & 0 & \frac{-u}{z} & \frac{-uv}{f_x} & \frac{f_x^2 + u^2}{f_x} & \\
 0 & \frac{f_y}{z} & \frac{-v}{z} & \frac{-(f_y^2 + v^2)}{f_y} & \frac{uv}{f_y} & u\\
 \end{array} \right] \times \left[ \begin{array}{c}
 T_x \\
 T_y \\
```

```
 T_z \\
 \omega_x \\
 \omega_y \\
 \omega_z \\
 \end{array} \right]
\end{equation}

\noindent Some text here.

\begin{figure}[ht]
\centering
 \includegraphics[scale=.75]{figure1.jpg}
  \caption{Figure 1}
  \label{figure1}
\end{figure}

\noindent Do not mispell words.

\begin{figure}[ht]
\centering
 \includegraphics[scale=.75]{figure2.eps}
  \caption{Figure 2}
  \label{figure2}
\end{figure}

\end{document}
```