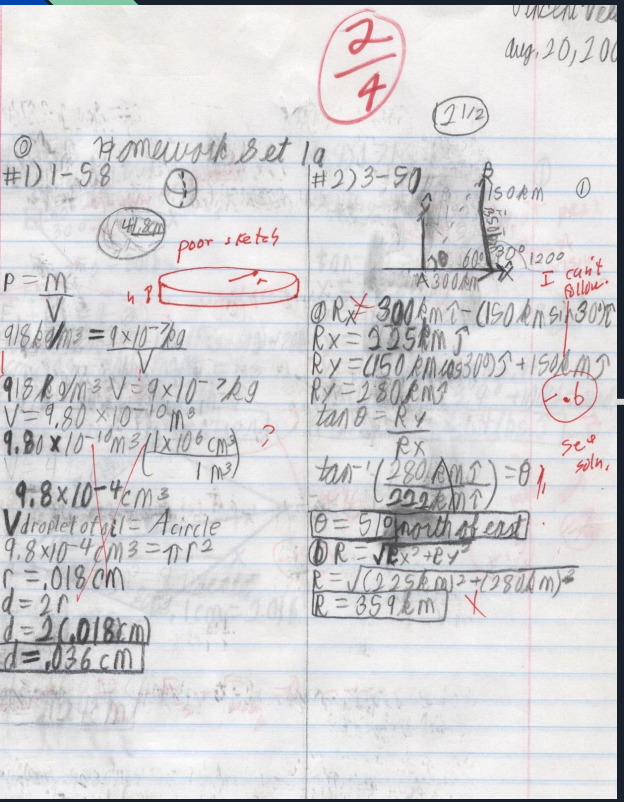
Latex

Or how I learned to stop worrying and love macros

Announcements!

- Last lecture before labs are due!
  - 12/5/2019 3:00pm

LaTeX



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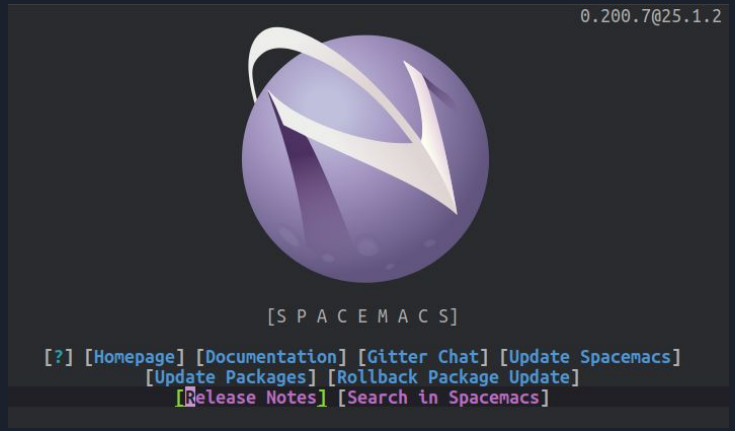
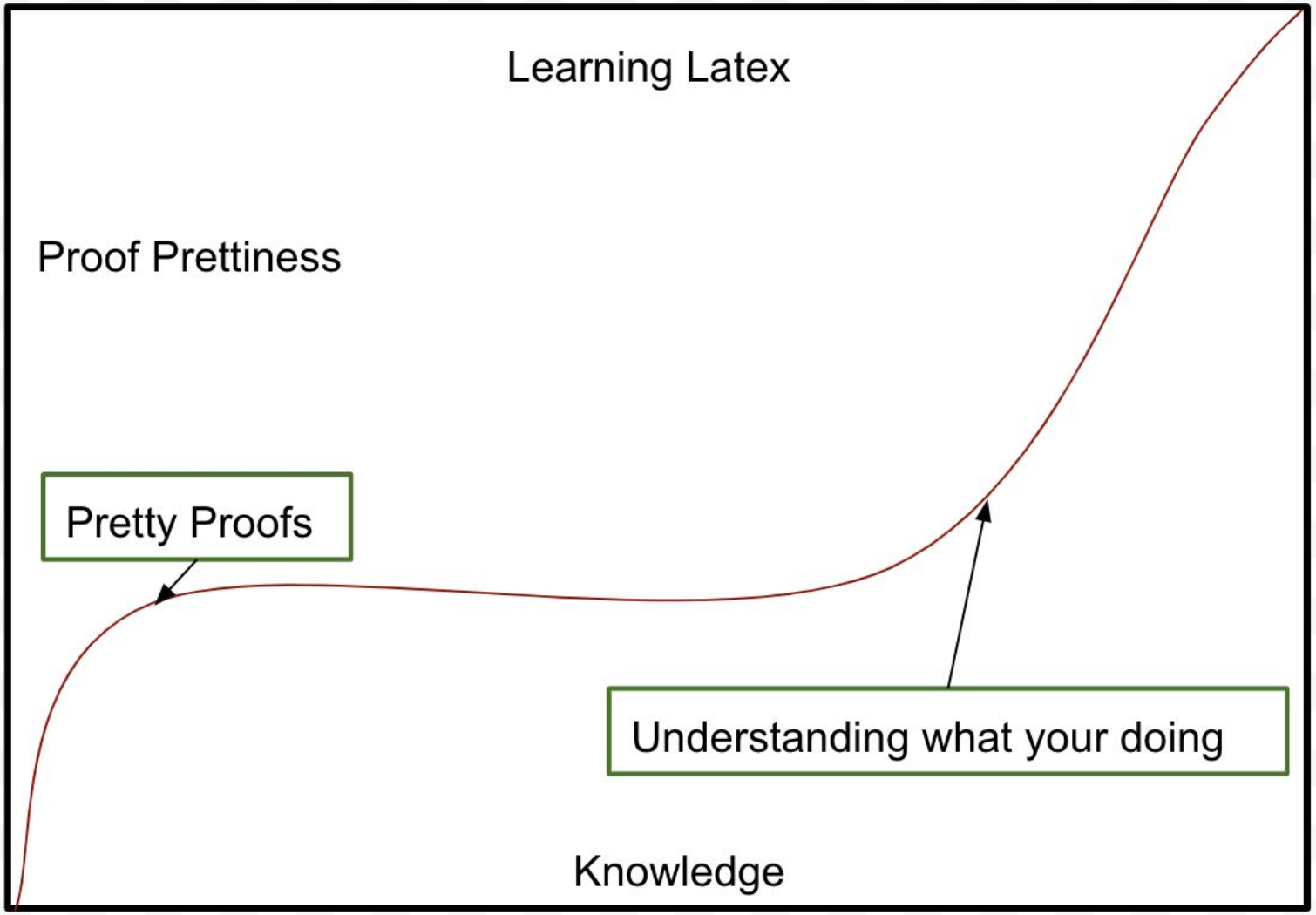
How do I use it?

Visual Studio Code

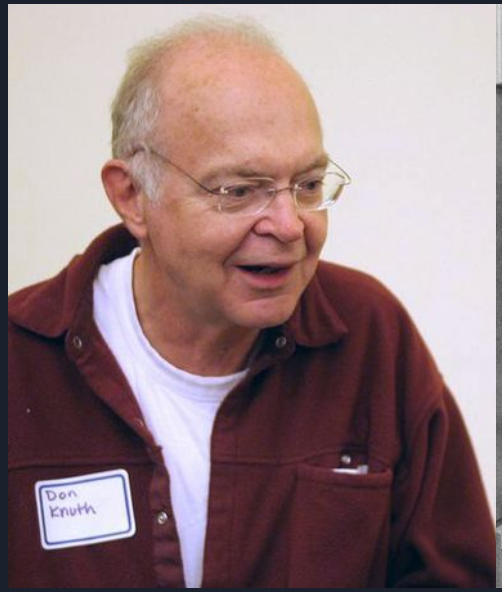


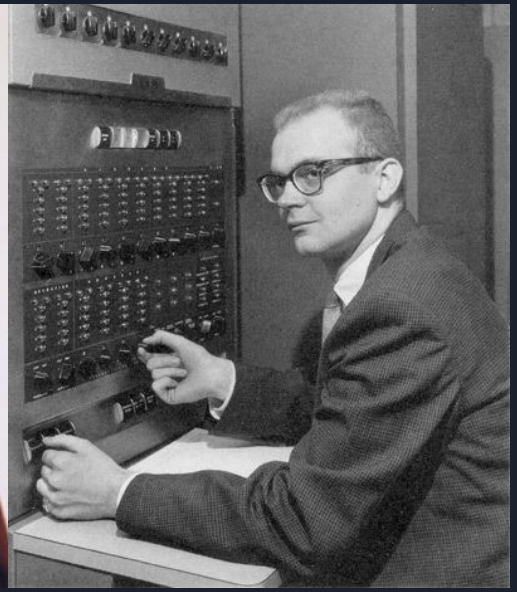
Overall

- Latex is a typesetting language, it is closer to a programming language like java than a text editor like Microsoft word
- Learning curve is not as steep as it appears!


Learning Latex
Proof Prettiness
Pretty Proofs
Understanding what your doing
Knowledge

History of Latex





Donald Knuth

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Using Latex

Refer to the cheat sheet!
Link HERE! Reference Wiki HERE! Stack Exchange HERE!

General Ideas

- NO HARD CODING
- You declare the rules and Latex tries to follow them

Beginning

Preamble and Top Matter

Setting the document class, including packages, providing information, and generally setting up the entire document

```
\documentclass[]{IEEEtran}
\usepackage{url}
\begin{document}
\title{Presentation}
\author{Jack Cameron}
\date{\today}
\maketitle
```

Latex Commands

\LATEXCOMMAND[optional, optional]{ARGUMENT}

\begin{flalign*}

\end{flalign*}

\author{Jack Cameron}

\today

\documentclass[twocolumns, 10pt]{article}

Macros

\newcommand{\name}[number of args]{definition}

\newcommand{\gpiTAs}[2]{These people are GPI TAs #1 and #2}

\gpiTAs{Jim}{Joe}

These people are GPI TAs Jim and Joe

Math Mode

\(\), $ Enters inline math mode

\[\] enters newline math mode ($$ is outdated)

\begin{flalign*} enters multiline mathmode

\tag{} cites current line

Detextify!!

If you do not know what the command for a symbol is, find it on Detexify!

Tex Lab is out! (helpful hints!)

- _{} ^{} for subscript/superscript x^{x+1} = x^{x+1}
- Detexify
-

Lab Pro Tips

- The lab will be graded loosely. Just make sure to typeset reasonably. Math errors / transcription errors won't count against you.
    - You don't have to do the arrows! (or the doodles, though we'd be very impressed if you do)
- Make sure to submit both the written.tex and the written.pdf files. `make handin` will create the zip for you. The writeup explains how to create the zip if you use overleaf.
- To get started with overleaf, start a project and then upload the written.tex and homework.cls files. You'll need to scp them from andrew first.
- If you use overleaf, then you'll have to create the zip manually
- `make handin` won't work on AFS since it doesn't have a full LaTeX installation. Its for local use: to install latex locally see: https://www.cs.cmu.edu/~07131/f19/topics/latex/getting-started/
- For an example using the homework.cls, see: https://github.com/cmugpi/latex-sample