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BlaTeX



Static Site Compilation for Advanced Markup Language Documents

Background

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- Static sites (compare to dynamic sites)
- Haskell (compare to Java)
- LaTeX (compare to Markdown)
- PDFs (compare to HTML)

```
\documentclass[12pt]{article}

\title{\LaTeX: The better way}
\begin{document}
\maketitle

\section{Introduction}
\LaTeX is a robust typesetting language in which one can prepare
publication-quality documents with ease. It allows you to shift your focus
from the formatting of your document to the content. Results are
consistent, compatible across a multitude of operating systems, and best
of all, the programs are open source. Below are two examples of equations
as generated by \LaTeX.

%This is comment text, it won't be visible in the final document, but is
useful for annotation.

\section{Equations}
\subsection{pH equation}
\begin{equation}
\text{pH} = \text{pK}'_a + \log \frac{[R^-]}{[RH]}
\end{equation}
\subsection{Enzyme kinetics equation}

\begin{equation}
\frac{1}{v} = \frac{1}{V_{\max}} \left( 1 + \frac{[I]}{K_i} \right) \left( \frac{1}{[S]} \right) + \frac{1}{V_{\max}}
\end{equation}
```

\LaTeX : The better way

1 Introduction

\LaTeX is a robust typesetting language in which one can prepare publication-quality documents with ease. It allows you to shift your focus from the formatting of your document to the content. Results are consistent, compatible across a multitude of operating systems, and best of all, the programs are open source. Below are two examples of equations as generated by \LaTeX .

2 Equations

2.1 pH equation

$$\text{pH} = \text{pK}'_a + \log \frac{[R^-]}{[RH]} \quad (1)$$

2.2 Enzyme kinetics equation

$$\frac{1}{v} = \left(\frac{K_m}{V_{\max}} \right) \left(1 + \frac{[I]}{K_i} \right) \left(\frac{1}{[S]} \right) + \frac{1}{V_{\max}} \quad (2)$$

BlaTeX

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- Static site compiler written in Haskell for LaTeX documents

The screenshot shows the GitHub repository page for **2016rshah / BlaTeX**. The repository has 75 commits, 2 branches, 0 releases, and 1 contributor. The file list includes:

File	Description	Time
posts	Split up code into separate file, pushed new version	3 months ago
.gitignore	Expanded on the making of	25 days ago
BlaTeX.hs	Fixes #1	16 days ago
Files.hs	Fixed date format	3 months ago
Main.hs	Split up code into separate file, pushed new version	3 months ago
README.md	Add date field to HTML, fixes #3	2 months ago
Setup.hs	Started cabal project	5 months ago
blatex.cabal	Fixes #1	16 days ago
index.html	Add date field to HTML, fixes #3	2 months ago
index.html.bltx	Just vanilla blatex for testing purposes. Moved actual blog to /thoughts	3 months ago

Below the file list is the **README.md** section, which displays the **BlaTeX** logo.

How it Works



Install

Initialize

Build

Posts


Template

Finished Static Website

Install Hackage package



- ``cabal install blatex``

 blatex: Blog in LaTeX

Home | Search | Browse | What's new | Upload

The blatex package

[Tags:mit, program]

Markdown and HTML are the standard tools used to write your every day tech blog with. But they have pretty weak support for embedding mathematical formulas, and are not conducive to writing for an extended period of time. Plus, they aren't even Turing complete! So use BlaTeX to start blogging in LaTeX!

BlaTeX is basically a static site generator (like Jekyll) that lets you write your blog in LaTeX, specify a layout file for the homepage, and publish it to github pages.

To get started, check out <https://github.com/2016rshah/BlaTeX#how-to>

Properties

Versions	0.1.0.0, 0.1.0.1, 0.1.0.2, 0.1.0.3, 0.1.0.4, 0.1.0.5 , 0.1.0.6, 0.1.0.7, 0.1.0.8, 0.1.0.9
Dependencies	base (==4.7.*), blaze-html (>=0.8.1.1), dates (>=0.2.2.1), directory (==1.2.*), HaTeX (==3.16.*), process (>=1.2.0.0), split (==0.2.*), tag soup (>=0.13.3), text (==1.1.*) [details]
License	MIT
Author	Rushi Shah
Maintainer	2016rshah@gmail.com
Stability	Unknown
Category	Web
Home page	https://github.com/2016rshah/BlaTeX
Source repository	head: git clone https://github.com/2016rshah/BlaTeX.git
Uploaded	Fri Feb 19 15:35:15 UTC 2016 by 2016rshah
Distributions	NixOS:0.1.0.9
Downloads	162 total (30 in the last 30 days)

Initialize site

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- ``blatex init``
 - ``index.html.bltx``
 - ``posts/`` directory
 - ``posts/example-post.tex`` file
 - ``posts/example-post.pdf`` file

Write/edit posts

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- Write and compile LaTeX documents as usual
 - BlaTeX looks in the ``posts/`` directory
- No interruption in typical workflow

L^AT_EX

Design a static website

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- Build your website in the `index.html.bltx` file
 - BlaTeX will use this template file to build your static site
 - Looks for the following code: `
`



Style the HTML elements

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- No interruption of typical workflow

```
<li class="blog-post">  
  <a class="post-link" href="posts/example-post.pdf">  
    Example Post  
  </a>  
  <div class="post-date">  
    1 January 2015  
  </div>  
</li>
```

Compile your static site

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```
$ ~/github/Meta-BlaTeX (master) blatex build
Getting directory contents
Turning directory contents into posts
All posts are well formed
Turning posts into an HTML element
Reading the layout file
Inserting HTML element into layout file
Writing resulting file into index.html
Success building!
```

Possible Errors

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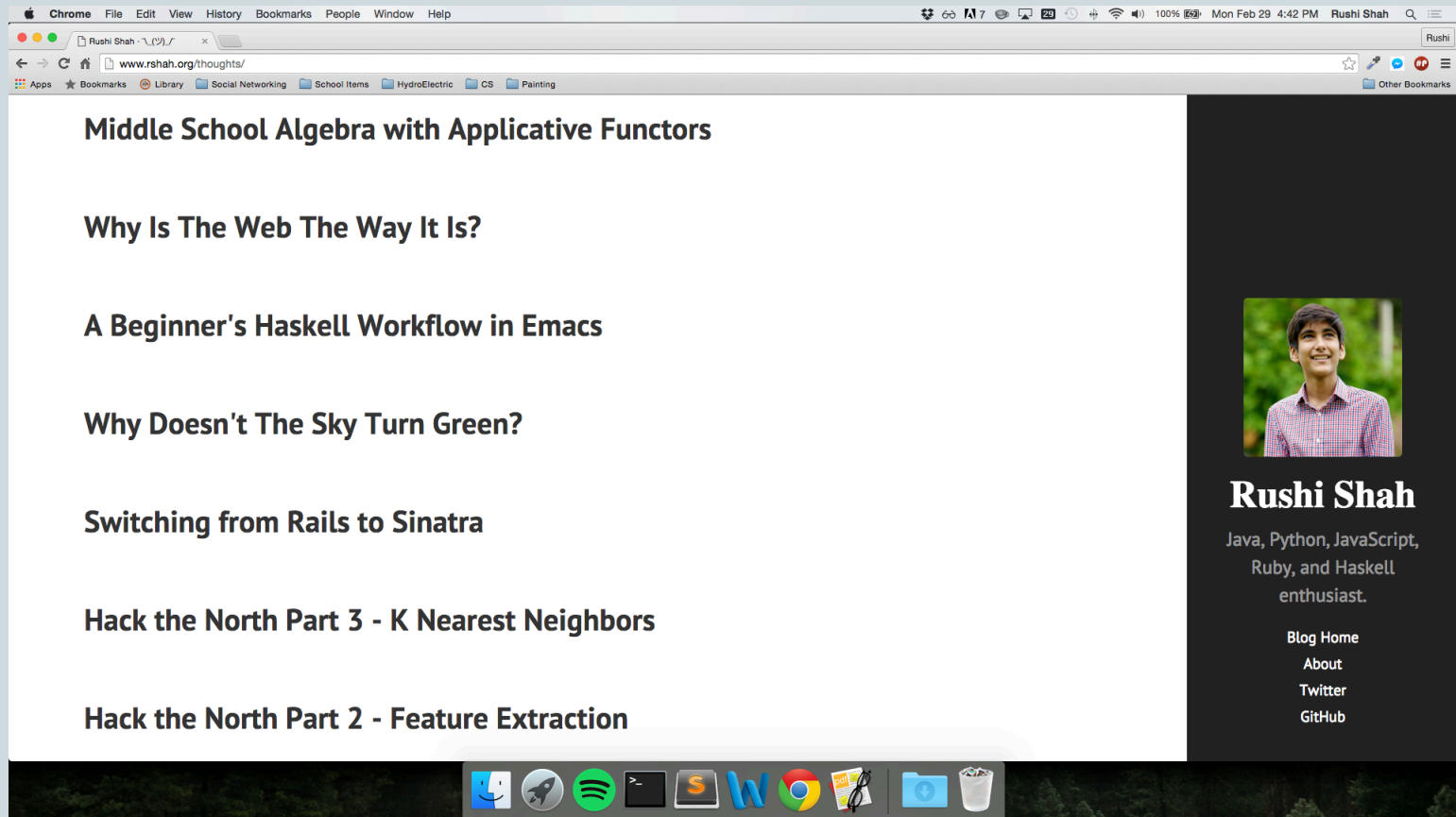
- `Either`
 - Applicative Functor
 - Monad

```
createPost :: String -> LaTeX -> Either String Post
createPost s tree = Post <$> pure s <*> title <*> author <*> date <*> pure tree
  where
    date = (getCommandValue "date" tree) >=> parseAbsoluteDate
    author = getCommandValue "author" tree
    title = getCommandValue "title" tree
```

Compiled Site



- Open `index.html` in browser



Public Reception of BlaTeX

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- Github
- Facebook
- DC Hack and Tell
- tjSTAR Reception
- tjSTAR

2016rshah/BlaTeX

BlaTeX - :black_nib: Write your blog in LaTeX

GITHUB.COM

 Victor Lourng, Mathew Pregasen and 53 others

4 Comments

 Like

 Comment

 Share



Mathew Pregasen this is awesome!

Like · Reply · January 14 at 8:57pm



Rushi Shah Thanks, that means a lot to me!

Like · Reply · January 14 at 9:25pm



Write a reply...



Albert Martinez great job man, keep it up!

Unlike · Reply ·  1 · January 15 at 12:58am



Robert O'Connor



Like · Reply · January 23 at 11:19am