

# **chalk-annotate**

Hand-drawn chalk annotations for  $\text{\LaTeX}$  Beamer

v1.1 2026-04-25

MIT License

# Overview

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**What?** Pre-rendered PNG overlays with natural chalk grain and opacity variation.

**Why?** Far more realistic than pure TikZ decorations.

**How?**

1. Install the package
2. Add `\usepackage{chalk-annotate}`
3. Use annotation commands in your slides

**Result:**  emphasized text with a hand-drawn feel.

# Installation

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## Option 1: TeX Live (recommended)

- ▶ `tlmgr install chalk-annotate`
- ▶ Then just use: `\usepackage{chalk-annotate}`

## Option 2: Overleaf

- ▶ Upload `chalk-annotate.sty` and the `assets/` folder
- ▶ Set compiler to **XeLaTeX**

## Option 3: Local (manual)






- ▶ Download from GitHub: `github.com/zz19941127/chalk-annotate`
- ▶ Place `.sty` + `assets/` next to your `.tex` file
- ▶ Compile with `xelatex`

## Commands

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All commands take an optional [color] argument (default: red).

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Command	Effect
<code>\hlellipse{text}</code>	
<code>\hlunderline{text}</code>	
<code>\hlbox{text}</code>	
<code>\hlarrowright{text}</code>	text 
<code>\hlstrike{text}</code>	

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## Available Colors

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Five colors: red · blue · green · orange · purple

▶ Default (red)

▶ Blue

▶ Green

▶ Orange

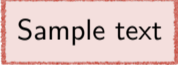
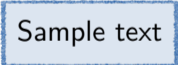
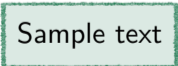
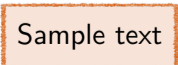
▶ Purple

## Box Styles

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




`\hlbox` uses two layers: **light fill** behind text + **chalk border** on top.

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Color	Result
red	
blue	
green	
orange	

## All Styles × All Colors

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	red	blue	green	orange	purple
Ellipse	 abc	 abc	 abc	 abc	 abc
Underline	<u>abc</u>	<u>abc</u>	<u>abc</u>	<u>abc</u>	<u>abc</u>
Box	 abc	 abc	 abc	 abc	 abc
Strike	<del>abc</del>	<del>abc</del>	<del>abc</del>	<del>abc</del>	<del>abc</del>

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## Academic Usage Example

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- ▶ Core concept: comparative advantage
- ▶ Traditional theory ignores the endogeneity of factor endowment structure
- ▶ Empirical finding  $\beta_1 < 0$ : deviating from comparative advantage inhibits growth
- ▶ Effect more significant for middle-income countries

Formula annotations:

$$Growth_{it} = \beta_0 + \beta_1 \cdot TCI_{it} + \beta_2 \cdot X_{it} + \mu_i + \lambda_t + \varepsilon_{it}$$



## Customization

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### Add a new color

1. Edit `generate-colors.py` —add your color to `COLORS` dict
2. Run: `python3 generate-colors.py`
3. Use: `\hellipse[teal]{text}`

### Use your own hand-drawn images

- ▶ Replace any PNG in `assets/<color>/`
- ▶ Requirements: RGBA PNG, transparent background
- ▶ Works with Procreate, Photoshop, or any drawing app

### Change asset path

- ▶ `\annsetpath{images/annotations}`
- ▶ Now looks in `images/annotations/<color>/`

# Requirements & License

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## Requirements

- ▶ XeLaTeX or LuaLaTeX
- ▶ Packages auto-loaded: `tikz`, `graphicx`, `calc`
- ▶ TikZ libraries: `calc`, `backgrounds`

## License

- ▶ MIT License —free for personal and commercial use
- ▶ Source: [github.com/zz19941127/chalk-annotate](https://github.com/zz19941127/chalk-annotate)