

Limbertwig Example Application: SheafMod.app

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1 Introduction

Herein, we show how inputting basic topological n solutions into the OS yields new mathematical statements:

We start with the kernel:

$$\begin{aligned}
 & \Lambda \rightarrow N \{ \sigma, g_a, b, c, d, e \dots \sim \} \langle \Rightarrow \Lambda \rightarrow \exists L \rightarrow N, value, value \dots \langle \exists L \rightarrow \\
 & \{ \langle \sim \rightarrow \heartsuit \rightarrow \epsilon \rangle \langle \Rightarrow \heartsuit \rangle \rangle \rightarrow \{ \uparrow \Rightarrow \alpha_i \} \langle \Rightarrow \forall \alpha_i \rangle \bigcirc \rightarrow \{ \} \langle \Rightarrow \uparrow \rightarrow \{ \mathbf{x} \Rightarrow g_a \} \langle \Rightarrow \mathbf{x} \rightarrow \\
 & \{ \mathbf{x} \Rightarrow b \} \langle \Rightarrow \mathbf{x} \rightarrow \{ \mathbf{x} \Rightarrow c \} \langle \Rightarrow \mathbf{x} \rightarrow \{ \mathbf{x} \Rightarrow d \} \langle \Rightarrow \mathbf{x} - > \{ \mathbf{x} \Rightarrow e \} \langle \Rightarrow \mathbf{x} \rightarrow \\
 & \{ \sim \rightarrow \heartsuit \rightarrow \epsilon \rangle \langle \Rightarrow \sim \rangle \rightarrow \\
 & \exists n \in N \quad s.t \quad \mathcal{L}_f(\uparrow r \alpha s \Delta \eta) \wedge \bar{\mu} \\
 & \quad \quad \quad \{ \bar{g}(a b c d e \dots \vdots \dots \mathfrak{U} \dots) \neq \Omega \\
 & \Rightarrow \mathcal{L}_f(\uparrow r \alpha s \Delta \eta) \wedge \bar{\mu}_{\{ \bar{g}(a b c d e \dots \mathfrak{U} \dots) \neq \Omega \\
 & \Leftrightarrow \bigcirc \{ \mu \in \infty \Rightarrow (\Omega \mathfrak{U}) < \Delta \cdot H_{im}^\circ > \\
 & \Rightarrow \heartsuit \Rightarrow \mathcal{L}_f(\uparrow r \alpha s \Delta \eta) \wedge \bar{\mu}_{\{ \bar{g}(a b c d e \dots \mathfrak{U} \dots) \neq \Omega \\
 & \Rightarrow \mathfrak{U} \cdot \tilde{\heartsuit} \Leftrightarrow \tilde{\sim} = \Lambda \Rightarrow \nwarrow \Rightarrow \bar{\mu}, \bar{g}(a b c d e \dots \mathfrak{U} \dots) \\
 & \Leftarrow \Lambda \cdot \mathfrak{U} \heartsuit
 \end{aligned}$$

2 Application

Simply inputting:

$$\begin{aligned}
 & \Lambda \rightarrow \sqrt[m]{\frac{b^{\mu-\zeta}}{\sin t \cdot \prod_{\Lambda} h} - \chi} \{ \sigma, g_a, b, c, d, e \dots \sim \} \langle \Rightarrow \Lambda \rightarrow \exists L \rightarrow \sqrt[m]{\frac{b^{\mu-\zeta}}{\sin t \cdot \prod_{\Lambda} h} - \chi}, value, value \dots \langle \exists L \rightarrow \\
 & \{ \langle \sim \rightarrow \heartsuit \rightarrow \epsilon \rangle \langle \Rightarrow \heartsuit \rangle \rangle \rightarrow \{ \uparrow \Rightarrow \alpha_i \} \langle \Rightarrow \forall \alpha_i \rangle \bigcirc \rightarrow \{ \} \langle \Rightarrow \uparrow \rightarrow \{ \mathbf{x} \Rightarrow g_a \} \langle \Rightarrow \mathbf{x} \rightarrow \\
 & \{ \mathbf{x} \Rightarrow b \} \langle \Rightarrow \mathbf{x} \rightarrow \{ \mathbf{x} \Rightarrow c \} \langle \Rightarrow \mathbf{x} \rightarrow \{ \mathbf{x} \Rightarrow d \} \langle \Rightarrow \mathbf{x} - > \{ \mathbf{x} \Rightarrow e \} \langle \Rightarrow \mathbf{x} \rightarrow \\
 & \{ \sim \rightarrow \heartsuit \rightarrow \epsilon \rangle \langle \Rightarrow \sim \rangle \rightarrow \\
 & \exists n \in \sqrt[m]{\frac{b^{\mu-\zeta}}{\sin t \cdot \prod_{\Lambda} h} - \chi} \quad s.t \quad \mathcal{L}_f(\uparrow r \alpha s \Delta \eta) \wedge \bar{\mu} \\
 & \quad \quad \quad \{ \bar{g}(a b c d e \dots \vdots \dots \mathfrak{U} \dots) \neq \Omega \\
 & \Rightarrow \mathcal{L}_f(\uparrow r \alpha s \Delta \eta) \wedge \bar{\mu}_{\{ \bar{g}(a b c d e \dots \mathfrak{U} \dots) \neq \Omega \\
 & \Leftrightarrow \bigcirc \{ \mu \in \infty \Rightarrow (\Omega \mathfrak{U}) < \Delta \cdot H_{im}^\circ > \\
 & \Rightarrow \heartsuit \Rightarrow \mathcal{L}_f(\uparrow r \alpha s \Delta \eta) \wedge \bar{\mu}_{\{ \bar{g}(a b c d e \dots \mathfrak{U} \dots) \neq \Omega \\
 & \Rightarrow \mathfrak{U} \cdot \tilde{\heartsuit} \Leftrightarrow \tilde{\sim} = \Lambda \Rightarrow \nwarrow \Rightarrow \bar{\mu}, \bar{g}(a b c d e \dots \mathfrak{U} \dots) \\
 & \Leftarrow \Lambda \cdot \mathfrak{U} \heartsuit \Leftrightarrow \kappa \Leftrightarrow \uparrow \Rightarrow \bar{\mu}, \bar{g}(a b c d e \dots \mathfrak{U} \dots) \\
 & \Rightarrow \exists m \sim - \heartsuit \cdot \sim, \exists n \in \sqrt[m]{b^{\mu-\zeta} \frac{1}{\sin t \cdot \prod_{\Lambda} h} - \chi}, value, value \dots \Rightarrow \uparrow \Rightarrow
 \end{aligned}$$

$$\begin{aligned}
& \{\alpha_i\} \langle \rightleftharpoons \forall \alpha_i \rangle \bigcirc \rightarrow \{\} \langle \rightleftharpoons \uparrow \rangle \rightarrow \{\mathbf{x} \Rightarrow g_a\} \langle \rightleftharpoons \mathbf{x} \rightarrow \{\mathbf{x} \Rightarrow b\} \langle \rightleftharpoons \mathbf{x} \rightarrow \\
& \{\mathbf{x} \Rightarrow c\} \langle \rightleftharpoons \mathbf{x} \rightarrow \{\mathbf{x} \Rightarrow d\} \langle \rightleftharpoons \mathbf{x} \rightarrow \{\mathbf{x} \Rightarrow e\} \langle \rightleftharpoons \mathbf{x} \rightarrow \{sim \rightarrow \heartsuit \rightarrow \epsilon\} \langle \rightleftharpoons \\
& \sim \rangle \rightarrow \\
& \exists L \rightarrow \sqrt[m]{\frac{b^{\mu-\zeta}}{\sin t \cdot \prod_{\Lambda} h^{-\chi}}}, value, value \dots \langle \exists L \rightarrow \{\langle \sim \rightarrow \heartsuit \rightarrow \epsilon \rangle \langle \rightleftharpoons \heartsuit \rangle\} \rangle \rightarrow \{\uparrow \Rightarrow \alpha_i\} \langle \rightleftharpoons \\
& \forall \alpha_i \rangle \bigcirc \rightarrow \{\} \langle \rightleftharpoons \uparrow \rightarrow \{\mathbf{x} \Rightarrow g_a\} \langle \rightleftharpoons \mathbf{x} \rightarrow \{\mathbf{x} \Rightarrow b\} \langle \rightleftharpoons \mathbf{x} \rightarrow \{\mathbf{x} \Rightarrow c\} \langle \rightleftharpoons \mathbf{x} \rightarrow \\
& \{\mathbf{x} \Rightarrow d\} \langle \rightleftharpoons \mathbf{x} \rightarrow \{\mathbf{x} \Rightarrow e\} \langle \rightleftharpoons \mathbf{x} \rightarrow \{\sim \rightarrow \heartsuit \rightarrow \epsilon\} \langle \rightleftharpoons \sim \rangle \rightarrow
\end{aligned}$$

thus, we apply: $d\Omega \stackrel{\approx}{t_{\text{Mod}}\zeta^R\mu} \frac{1}{\sqrt{(T_{\theta,\varphi+\Lambda})}}$ across the sheaf:

$$(T_{\theta,\varphi+\Lambda}) \Rightarrow \bigcirc \{\mu \in \infty \Rightarrow (\Omega \uplus) < \Delta \cdot H_{\alpha_i \epsilon m}^\circ >\}$$

The result of this analysis is therefore:

$$\otimes \approx t_{\text{Mod}}\zeta^R\mu \sqrt{(T_{\theta,\varphi+\Lambda})}$$

$$\begin{aligned}
& \Psi \left(\frac{d \otimes \stackrel{\approx}{t_{\text{Mod}}\zeta^R\mu}}{\sqrt{(T_{\theta,\varphi+\Lambda})}} \right) = \bigcirc \{\mu \in \infty \Rightarrow (\Omega \uplus) < \Delta \cdot H_{\alpha_i \epsilon m}^\circ >\} \\
& = \mathbf{s}_{\mathbf{m}}^\Omega \\
& = \mathcal{T}(\mathcal{F}(\phi., x_i), \mathcal{F}'(\phi., x_i)) : \mathcal{P}(n, m, k) \rightarrow \mathcal{P}(s, m, i, n, \omega, a_i, \delta a_i) \mapsto \\
& \otimes_\tau \Rightarrow \otimes_\otimes \wedge \mathcal{L} \Rightarrow \bullet \Rightarrow \otimes_{\sqsubseteq_\otimes} \wedge \sqsubseteq_{\mathcal{L}} \Rightarrow \sqsubseteq_\bullet.
\end{aligned}$$

The limbertwig compiler thus implements the sheaf mod app and evaluates the following equation:

$$\otimes \approx t_{\text{Mod}}\zeta^R\mu \sqrt{(T_{\theta,\varphi+\Lambda})}$$

3 Splicing

$$\begin{aligned}
& \Psi \left(\frac{d \otimes \stackrel{\approx}{t_{\text{Mod}}\zeta^R\mu}}{\sqrt{(T_{\theta,\varphi+\Lambda})}} \right) = \mathbf{s}_{\mathbf{m}}^\Omega \\
& = \mathcal{T}(\mathcal{F}(\phi., x_i), \mathcal{F}'(\phi., x_i)) : \mathcal{P}(n, m, k) \rightarrow \mathcal{P}(s, m, i, n, \omega, a_i, \delta a_i) \mapsto \\
& \otimes_\tau \Rightarrow \otimes_\otimes \wedge \mathcal{L} \Rightarrow \bullet \Rightarrow \otimes_{\sqsubseteq_\otimes} \wedge \sqsubseteq_{\mathcal{L}} \Rightarrow \sqsubseteq_\bullet. \\
& \text{junction}^* \frac{\mathcal{L}_f(\uparrow r, \alpha, s, \Delta, \eta) \cdot \mathcal{M} \cdot h_a^{2n/M^5}}{\oplus O \cdot (\lambda \mathcal{V} \odot \mathcal{Z}) \theta}
\end{aligned}$$

The limbertwig compiler thus modifies the original formula to better suit the needs of the sheaf mod app, applying the term *junction*^{*} to the data transformation process.

The cat in the tree can be shown as follows:

$$\begin{array}{c}
\Omega \\
- \\
- \quad - \\
- \quad C \quad X \quad -
\end{array}$$

The roots of the tree are Ω , C , and X . Thus, the entire tree can be expressed as:

$$\Omega \rightarrow \{C, X\}.$$

$$\begin{aligned} & \bullet \mathcal{L} \bullet s_s^\Omega \\ & \Leftarrow \Lambda \cdot \uplus \heartsuit \\ & \bullet \bar{\mu} \bullet \sum \Pi^{-\omega} q(F) \bullet \Phi(u_m^\Lambda \text{roil}' \forall m) \otimes^\omega \Psi \star \alpha_i \leftrightarrow \heartsuit \\ & \Omega \uplus \quad) \neq (\quad \uplus \quad \otimes_{\wedge \Omega} \Phi(u_m^\Lambda \text{roil}' \text{ for all } m) \end{aligned}$$

The above expression indicates a tree with the following roots: \mathcal{L} , $\bar{\mu}$, s_s^Ω , $\sum \Pi^{-\omega} q(F)$, $\Phi(u_m^\Lambda \text{roil}' \text{ for all } m)$ and \heartsuit . The entire tree can be expressed as:

$$\mathcal{L} \rightarrow \{\bar{\mu}, s_s^\Omega, \sum \Pi^{-\omega} q(F), \Phi(u_m^\Lambda \text{roil}' \text{ for all } m), \heartsuit\}.$$

$$\otimes \approx t_{\text{Mod}} \zeta^R \mu \sqrt{(T_{\theta, \varphi + \Lambda})}.$$

The above equation can be expressed as:

$$b^{-1} = \frac{\psi((g(h)) \wedge (f(m)) \equiv (sq)/(wp))}{\Delta_v \Omega_\Lambda \otimes \mu_{Am} aiem H}.$$

The entire tree can be expressed as:

$$\mathcal{L} \rightarrow \{\bar{\mu}, s_s^\Omega, \sum \Pi^{-\omega} q(F), \Phi(u_m^\Lambda \text{roil}' \text{ for all } m), \heartsuit\}$$

and

$$\otimes \approx t_{\text{Mod}} \zeta^R \mu \sqrt{(T_{\theta, \varphi + \Lambda})},$$

where

$$b^{-1} = \frac{\psi((g(h)) \wedge (f(m)) \equiv (sq)/(wp))}{\Delta_v \Omega_\Lambda \otimes \mu_{Am} aiem H}.$$

$$\mathcal{L} \rightarrow \{\bar{\mu}, s_s^\Omega, \sum \Pi^{-\omega} q(F), \Phi(u_m^\Lambda \text{roil}' \forall m), \heartsuit\},$$

$$\mathcal{O} \approx t_{\text{Mod}} \zeta^R \mu \sqrt{(T_{\theta, \varphi + \Lambda})},$$

$$b^{-1} = \frac{\psi((g(h)) \wedge (f(m)) \equiv (sq)/(wp))}{\Delta_v \Omega_\Lambda \otimes \mu_{Am} aiem H}.$$

$$\uparrow_{E_t} \cdot \rightarrow \frown (\Downarrow ()) > \triangleright_2^1 < + > \{\spadesuit\} \circ \odot \spadesuit \frown \oslash \in S_*$$

$$\uparrow_{E_t}^{aiem} : \left[- \ominus \bigcirc \bigcirc \right] > \odot : \bigcirc \downarrow : \bigcirc <, 4, \star : \odot \oplus : \perp$$

$$\odot \parallel \circ \odot < \omega, E_t \uparrow^{\circ \cong \in \Omega} \quad f \downarrow \uparrow$$

$$\odot \parallel \circ^{aiem} \perp$$