Some stuff on Induction

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- Induction is important.
- Induction is hard.

How do you prove something about a loop?

for
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We all know that recursion is more interesting than looping ...

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This is inductive logic.

What about the recursion, in, say, Ben's typing rules:

$$\frac{\Gamma, \Theta \mid -f :: \alpha \to \beta \qquad \Gamma, \Theta \mid -n :: \alpha}{\Gamma, \Theta \mid -f \; n :: \beta}$$

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Image: A matrix

Induction is where theorem proving gets hard, because we need to state a special kind of invariant. Not the kind of invariant we could find through a debugger.

Conclusion

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- Induction is important.
- Induction is hard.

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