

Low-Level Liquid Types

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Refinement type inference for low-level languages

str: $\{v \mid v = s\}$

len: $\{v \mid v = \text{comma} - s\}$

Just f

All Fields

str: $\{v \mid p\}$

len: $\{v \mid q\}$

$Q = \{v \neq \text{NULL}, \text{size}(v) \geq \text{len}, v \geq 0\}$

SMT

$p = v \neq \text{NULL} \wedge \text{size}(v) \geq \text{len}$

$q = v \geq 0$

Isolate, strongly update, infer liquid refinement