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VectorSpace Holden Lee

I present a formalisation of basic linear algebra based completely on locales, building off HOL-Algebra.
It includes the following: enumerate
b asic definitions: linear combinations, span, linear independence
l inear transformations
i nterpretation of function spaces as vector spaces
d irect sum of vector spaces, sum of subspaces
t he replacement theorem
e xistence of bases in finite-dimensional vector spaces, definition of dimension
r ank-nullity theorem